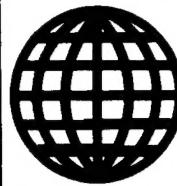


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27 JANUARY 1992



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JPRS Report

Telecommunications

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Telecommunications

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Danish Firms Laying Underwater Cable to Russia
92WT0065A *Copenhagen BERLINGSKE TIDENDE*
in Danish 21 Nov 91 p 4

[Article by Asbjorn Jorgensen: "Telecom Will Lay New Telephone Cable to Russia"—first paragraph is BERLINGSKE TIDENDE introduction]

[Text] Twenty-five telephone companies are helping Store Nord and Telecom with the investment in a cable to Russia.

The Russians have need of a telephone connection with the West. As a consequence, Teledanmark, Telecom, and GN Store Nord are busily digging 1300 kilometers under the Baltic Sea, beginning in Albertslund and ending west of St. Petersburg.

15,000 Lines

Now 25 other investors have joined the project, which will cost a total of 500 million kroner. The 25 are companies spread throughout the world who have bought into over 15,000 lines in the new cable.

The negotiations took place in Copenhagen this week. The Russian communications deputy minister participated.

For him, the cable means the possibility of communication with the outside world, but he also sees it as a necessity for inducing foreign businesses to locate in Russia.

The entire capacity has been sold. If others wish to use the cable across the Baltic, they will have to lease it. The cable and its fixtures will be ready for operation in a year and a half.

Direct Dialing Between Finland, Karelia
92WT0059A *Helsinki HELSINGIN SANOMAT*
in Finnish 28 Nov 91 p 9

[Unattributed article: "Mutual Cooperation Will Get Communications in Shape Between Finland and Karelia"]

[Text] Telephone connections to Karelia will improve next fall when direct connections to Finland from Petroskoi are completed. In the same manner as in the recently signed agreement for cooperation with Estonia, the Bureau of Roads is also ready to begin discussions about building highways, machinery and their servicing, and the exchange of information in Karelia.

In order to fund joint procurement the Republic of Karelia and the Eastern Finland Area Advisory Council recommend the establishment of an investment fund. The Advisory Council is also trying to influence an agreement concerning adjacent area cooperation between Finland and Russia which is expected to take place at the beginning of next year in connection with the visit of Russian president Boris Yeltsin.

At the meeting of the Advisory Council in Sortavala its Finnish chairman, Member of parliament Aarno von Bell (SD), proposed that the investment fund be underwritten half by Finland and half by Russia.

The chairman of the Advisory Council, Vice Prime Minister Sergei Jaskunov, considered the expansion of activities and adjacent area cooperation and the fulfillment of previous decisions most important. It is already known which firms in Karelia and Finland will construct the telephone linkages next summer. They will share 500,000 Finnish marks for the job.

In Sortavala the Karelian Council of Ministers was ready to countersign an agreement permitting the crossing of the border to render assistance in fire and rescue activities, but the Finnish counterpart was not present.

Karelia is attempting to contract the agreement directly without Russian assistance, according to Jaskunov.

The province of Mikkeli would also like to participate in the Area Advisory Council. However the border townships of Kainuu and Northern Karelia took a skeptical stand toward expansion of the region and fear that stagnation will occur in the handling of affairs.

They hope that Mikkeli will find its own form of cooperation.

Contracts Won To Update Baltic Phone Nets
92WT0065B *Copenhagen BERLINGSKE TIDENDE*
in Danish 22 Nov 91 p 7

[Article by Asbjorn Jorgensen: "Swedes Run With Baltic Telephone Order"—first paragraph is BERLINGSKE TIDENDE introduction]

[Text] Billion-dollar orders for telephone systems in the Baltic states are about to slip out of the hands of the Danish telephone companies.

Before the eyes of the Americans and the Danes, among others, Swedish Televerket is snatching victory in the contest for the Baltic telephone nets.

An agreement for orders well-above one billion kroner over a two-year period was signed by the National Swedish Telephone Company and Latvia and Estonia's telephone companies, who will receive Swedish capital.

The Swedes will connect Latvia and Estonia with the Western world, among other things, with a cable crossing the Baltic Sea. The optical fiber cables will be fabricated in these countries, and the local nets will be expanded. The entire development of the telephone nets in the two Baltic states is probably worth 10 billion. The Swedish telephone industry will be participating in the plan as major suppliers.

In consequence, the Danish effort to enter into these exciting markets has now gone down the drain. Teledanmark and the regional telephone companies' export firm,

Danish Telecom International [DTI], fought hard for the region, and over a considerable period of time attempted to nudge the Balts into an agreement.

A direct offer was tendered for cooperation, supported by the Danish minister of communications and helped along by the minister of foreign affairs' earlier support for the Baltics.

"In a goal directed dialogue, we attempted to convince the Balts that the Danish telephone companies and Danish telephone industry is applicable to their situation," said Director Thomas Andresen of Danish Telecom International.

"Naturally it is annoying that Swedish Televerket got the orders. Maybe they have greater access to government help. But we still think that we can get orders in the Baltic countries," said Andresen.

"It will not be as an exclusive supplier, but as second or third or fourth. Even so, it is better to get a partial order than nothing at all."

Nevertheless, there are still opportunities in the former Communist countries. DTI operates in Poland, and Telecom and GN Store Nord are laying telephone cable under the Baltic Sea to Russia. At NKT, Director Ole Steen Andersen believes that orders can still be gotten to connect the Baltic states into a master net for further relay in the West.

A qualified guess of what must be invested in the Soviet Union in order to give its inhabitants a reasonable telephone service is 80 billion kroner.

Space Channel To Transmit Taped Programs to London

NC0101083392 Cairo *AL-AKHBAR* in Arabic
27 Dec 91 p 1

[Text] The Egyptian Space Channel will resume transmissions to London for seven hours a day using video cassettes beginning 7 January 1992. Transmission to London has been interrupted in the past few days because the first Arab satellite has run out of fuel.

Hong Kong To Act as Russian Telecom Hub

WA0901093091 Hong Kong *SOUTH CHINA MORNING POST* in English 5 Nov 91 p 1

[Article by James Riley]

[Text] British telecommunications giant Cable and Wireless entered its first joint-venture projects in the Russian Republic yesterday with agreements that effectively make Hongkong the international telecommunications gateway for two newly established free economic zones (FEZs) in the Soviet Union.

The two ventures will use Hongkong Telecom facilities as the international switching gateway for the two FEZs,

using the Asia-Sat-1 telecommunications satellite to provide access to and from the territory.

Hongkong Telecom is a subsidiary of Cable and Wireless.

The 50-50 ventures will provide Digital Overlay Networks in the FEZs of Nakhodka (80 kilometres east of Vladivostok), and Sakhalin (an island to the north of Japan) that will include reliable local and international voice, fax and data transmission services.

The service agreements will operate under exclusive 25-year franchises. Capital expenditure on the projects is expected to reach US\$10 million in the first year, and at least \$50 million over the first 10 years.

Although the joint ventures will rely primarily on skilled labour at each location, it is understood a number of Hongkong Telecom engineers will travel to Russia on a project basis to help with implementation of the networks.

Cable and Wireless Asia-Pacific regional director Peter Jackson said the company had been negotiating with its Russian partners for more than one year.

Despite the political uncertainties in Russia this year, Mr. Jackson said the joint-venture agreements were absolutely watertight. The licence issued to Comincom (the principal Russian signatory to the deal) had been issued by the Soviet Union and ratified by the Government of the Russian Republic.

Mr. Jackson said the agreements were exactly in line with the objectives of the Russian Republic to develop a market economy and re-establish direct trade and investment links with the rest of the world.

Cable and Wireless is understood to be negotiating similar joint venture arrangements elsewhere in Russia, although Mr. Jackson declined to discuss those talks.

The company is known to be planning and discussing with authorities the installation of fibre optic cable gateways on both the western and eastern sides of Russia as part of its global digital network.

Cable and Wireless said it had obtained the necessary export clearance from the Co-ordinating Committee for Multilateral Export Controls (COCOM) for the 565 megabit optical fibre cables it would use for such a project.

COCOM clearance had also been gained for the submarine fibre optic cable to land at St. Petersburg in the west and Nakhodka in the east of the Country. Approval had also been granted for the establishment of 140 Mbit microwave links from the cable landing points to Moscow and Kiev in the west and to Khabarovsk and Vladivostok in the east.

The joint ventures in Nakhodka and Sakhalin did not involve technology that required approval from COCOM, Cable and Wireless said.

The latest joint-venture deal was signed in Moscow between Cable and Wireless' director of new business and strategy Jonathon Solomon, and various Russian partners including Comincom.

Comincom—officially recognised by the International Telecommunications Union (ITU)—was set up principally to provide commercial international telecommunications, and to establish and operate Digital Overlay Networks throughout the USSR.

The two FEZs are due to open early next year, and will be similar in style to China's Special Economic Zones such as Shenzhen, aiming to attract international investment.

According to Mr. Jackson there is a realisation in Russia that the success of its FEZ strategy will be largely dependent on fast and reliable communications to attract foreign enterprises.

Should the correct equipment be installed, both FEZs would be able to receive HutchVision's STAR-TV service, although it is not yet clear how Russian broadcasting regulations will be applied in the new economic zones.

TASS To Close Down Colombo Bureau in March
BK0801130892 Colombo LANKAPUVATH in English
1144 GMT 8 Jan 92

[Text] Colombo, 8 Jan (LANKAPUVATH)—The Moscow-based international news agency TASS, which has a global network of correspondents, is to close down its bureau in Colombo in March this year, as a cost-cutting measure, informed sources told LANKAPUVATH.

TASS, which was the official news agency of the former Soviet Union, has its headquarters in Moscow, which is in Russia, but is not the official news agency.

Meanwhile, the Russian embassy in Colombo has closed down the information department, which functioned earlier under the now-defunct Soviet Union.

South Koreans Seek Permission To Introduce TV Network

EA0101121592 Dar es Salaam Radio Tanzania
External Service in English 0415 GMT 1 Jan 92

[From the press review]

[Text] UHURU has reported on page three that a South Korean company, (?Daewoo), has asked for permission from the government to introduce a three-channel television network in the country.

Joint Telecommunications Company Set Up With Azerbaijan

NC0201103792 Istanbul HURRIYET in Turkish
26 Dec 91 p 5

[Unattributed report: "Telecommunications Network for Azerbaijan"]

[Text] Turkey and Azerbaijan have established a joint company to improve Azerbaijan's telecommunications network. The new company, called ULTEL [expansion unknown], has been established in Baku by Turkey's NETAS [Northern Electric Telecommunications Corporation] and ULDEZ [Azerbaijan Ministry of Communications Research and Production Union]. Kurultay Gozutok, a NETAS director, has been appointed director general of ULTEL.

The new company will produce DRX-4 telephone exchange units, which can accommodate 100,000 subscribers and 100,000 telephones every year. NETAS contributed machinery and equipment worth almost 5 million dollars toward the establishment of ULTEL.

REGIONAL AFFAIRS

Telecommunications Firm To Expand Network With South Africa

*MB0901112292 Johannesburg SAPA in English
1026 GMT 9 Jan 92*

[Text] Lusaka Jan 9 SAPA—The Posts and Telecommunications Corporation (PTC) of Zambia is to expand its telecommunications network in liaison with South Africa to ease congestion.

This was confirmed by PTC Managing Director Philemon Ngoma on Wednesday at the start of a Zambian/South African bilateral meeting in Lusaka.

Mr Ngoma said the bilateral meeting was "designed to mark the beginning of an enhanced relationship which should filter through to personal levels".

"As you are aware we are in the process of transferring our mutual traffic from the Indian Ocean region 60 degrees satellite to the Atlantic Ocean region 335.5 degrees satellite. It is hoped that expansion of the route will be easily undertaken and ease the congestion that has been noticeable for sometime," he said.

Zambia would now transmit her traffic to Swaziland, Lesotho and Namibia through South Africa. Similarly, Zambia would welcome requests from South Africa to transmit through Zambia to countries such as Tanzania and Zaire.

The Zambia/South Africa link has 36 circuits in operation and is the second largest traffic stream for Zambia, he said.

BURKINA FASO

New FM Station Slated for Operation

AB2812163691 Ouagadougou Radiodiffusion Nationale du Burkina Radio in French 1300 GMT 27 Dec 91

[Interview with Patrick Tiessongo, director of the national radio station, by Romuald Somda; place and date not given]

[Excerpts] A new FM radio station, to be known as Canal Arc-en-Ciel, will soon go into operation. Our reporter Romuald Somda has interviewed Comrade Patrick Tiessongo, director of the national radio station, the Radiodiffusion Nationale du Burkina, about the objectives of that radio station and its future relations with the first FM station already in existence.

[Begin recording] [Tiessongo] Canal Arc-en-Ciel is an FM radio network that we have decided to begin operating on 31 December this year. Now, you would like to know our objectives or motivations for creating this FM radio. The main ones are the following:

First, we want to meet the expectations of our listeners by providing a more easily understandable and more captivating programming. It will meet the expectations of everyone, I mean all our listeners. We want the programming to meet the expectations of the various sections of our listeners. As you know, the national radio station is often blamed for not allotting enough time to entertainment programs.

Second, in achieving our first objective we will thus devote more time to educational and even instructive programs on the international network. [sentence as heard]

Third, you know that communications technology is progressing very, very rapidly. Satellites are being used, thus requiring the acquisition and use of more efficient equipment. In the field of radio broadcasting, frequency modulation presents the best transmission and reception conditions. It also has many other advantages: The sound is perfect and the acquisition and maintenance of FM equipment are sometimes tenfold cheaper than the existing medium- and short-wave equipment at our station. So you will understand that we will be better off by adopting the FM system which is being adopted by virtually every country. In sum, our long-term objective is to ensure that in the next 10 years—perhaps even earlier—our FM programs cover the entire territory.

[Somda] Comrade director, in addition to entertainment programming, will the new FM radio have other types of programming?

[Tiessongo] Yes! As I said, the role of a radio station is, in principle, to educate and inform the people, but through entertainment, namely a wide range of programming revolving around entertainment, games, and music, with all of those providing listeners with the opportunity to work or rest while listening to instructive but recreative programs. [passage omitted]

[Somda] Comrade director, there is already an FM station in existence known as Horizon-FM. What will be the relationship between Canal Arc-en-Ciel and Horizon-FM?

[Tiessongo] Well, I believe that we will try and strengthen the existing ties between Horizon-FM and the national radio station by promoting cooperation because there will be no competition between both stations. I believe that we will essentially promote cooperation between them on the basis of complementary interaction. [passage omitted] In fact there is already friendly cooperation between Horizon-FM and the national radio. As you know, the former hooks up to the latter for the network newscast, which is already an extremely positive step. This cooperation is rewarding for both stations.

[Somda] A last question, Comrade director: How far will the coverage of that new station extend?

[Tiessongo] In the early stage, thanks to the powerful transmitter that we have just acquired, we plan to transmit to up to 100 km from Ouagadougou, if we fully tap the potential of the equipment. [end recording]

LAOS

Bouathong Speaks on Communications Improvement

*BK2001095092 Vientiane KPL in English 0900 GMT
20 Jan 92*

[Text] Vientiane, January 20 (KPL)—Post and telecommunication system in the country is to be improved and modernised, especially through the effective implementation of the foreign funded project for the post and telecommunication development phase 2 and phase 3.

Minister of Communication, Post, Transport and Construction Bouathong said this in his address at the annual conference on post and telecommunication here on 14-18 January.

The improved and expanded communication system was designed to ensure rapid, accurate and reliable contacts between provinces and districts and contacts with overseas, hence making telecommunication in the country a reliable communication network.

VIETNAM

Nguyen Van Linh Visits HCM City Telecommunications Sector

BK1601094792 Hanoi Vietnam Television Network in Vietnamese 1200 GMT 31 Dec 91

[Text] On 24 December 1991, Comrade Nguyen Van Linh, adviser to the party central committee, visited some operational and technical installations of the post and telecommunication sector in Ho Chi Minh City. Dang Van Than, the director general and party central committee member, many leaders of the General Post

Corporation and large numbers of cadres of the postal sector warmly welcomed and accompanied the adviser.

At the International Telecommunication Center of Region 2, Comrade Nguyen Van Linh listened to a briefing on the construction and operational capability of the Lotus 1 ground satellite station and the Intersat 1A station. He saw engineers and workers of the postal sector who were being assisted by experts from the Republic of France. They were working on the final technicalities that will enable the 30,000-number AGENTEL-CTT electronic telephone exchange to be officially put into operation on 29 December. This would initially change the city's telephone communications.

The adviser also visited the central public relations installation of the city's telephone service. Talking with the postal sector leaders, Comrade Nguyen Van Linh praised the creative efforts of the postal cadres and workers who have boldly used cooperation opportunities with foreign countries to quickly modernize postal communications and increased its service capability. He also reminded postal cadres that communications is the country's nerve system.

Microwave Link Established Between Hanoi, Lai Chau

*BK1301143792 Hanoi VNA in English 1425 GMT
13 Jan 92*

[Text] Hanoi VNA Jan. 13—A 500-km digital microwave telecommunication line from Hanoi to the mountain province of Lai Chau was inaugurated here today by the Corporation of Posts and Telecommunications.

The line passes through Ha Tay, Hoa Binh and Son La provinces.

This is the fourth line of its kind to link Hanoi with all the mountain border provinces in north Vietnam excepts Yen Bai and Ha Giang provinces.

CZECHOSLOVAKIA**Magion-3 Satellite Separates From
Intercosmos-25**

*LD0201103392 Prague CSTK in English
0847 GMT 2 Jan 92*

[Text] Prague Jan 2 (CSTK)—Magion 3, a new Czechoslovak satellite designed for plasma research in the magnetosphere and ionosphere, was disengaged from the Soviet Intercosmos 25 satellite and put into orbit December 28.

Pavel Triska, secretary of the Czechoslovak Space Research Commission, told CSTK Tuesday all tests carried out in the first three days of Magion's operation were successful.

The satellite works in the framework of an international research programme centering on space effects on earth and coordinated by a group of space agencies including European ESA, U.S. NASA, Soviet Intercosmos and Japan's ISAS.

HUNGARY**Telecommunication Enterprise President
Interviewed**

*92WT0073X Budapest FIGYELO in Hungarian
28 Nov 91 p 13*

[Interview with Hungarian Telecommunication Enterprise President Pal Horvath by Zoltan Meixner; place and date not given: "Hungarian Telecommunication Enterprise: New Lines"—first paragraph is FIGYELO introduction]

[Text] Not too long ago encouraging a person to use the telephone sufficed to demonstrate the Hungarian economic crisis. That person was able draw some important conclusions while waiting for a line. Many things have changed since, at least insofar as telecommunications are concerned. We inquired from Hungarian Telecommunication Enterprise [MATAV] President Pal Horvath in this regard.

[Meixner] Last August MATAV's entire upper management had been dismissed. What justified this drastic change?

[Horvath] Certain tasks requiring a changed outlook had to be performed and the required new outlook could be expected more from younger persons who also had an appropriate training and education than from the previous staff. A unified management representing an entirely new line of thought had to be established in order to make changes as great as the ones that were needed in Hungarian telecommunications. Only a united team is able achieve its goal, and we can be united only if we trust each other. This often means that we rank professional considerations lower than issues of confidence.

[Meixner] Forgive me, but this reminds me of the past system in which leaders were not selected on the basis of professional capabilities, but on grounds of trustworthiness.

[Horvath] I did not say a single word about the new leaders not knowing what they were doing. Instead, I said that special abilities were needed for team work. And further, the leadership is not at all closed, fitness is determined in the course of practical work, and that's where some people prove their fitness for leadership while others do not. And then some new tasks surface from time to time and the team must be supplemented. But most certainly, no one has been retained in management just because he had good personal connections.

[Meixner] Regardless of what you say, I feel that you are trying to make the important decisions at the top level.

[Horvath] This is true insofar as strategic decisions are concerned. Just think about the fact that in most large enterprises, and thus also at MATAV, the good or bad fortunes of the firm are determined by 10 percent of the employees, at most. We must cultivate that 10 percent far more than the remaining 90 percent. Their tasks, authority and responsibilities must be accurately defined. Operations will become much more democratic when the organizational and operating rules [SZMSZ] take effect in a few weeks, even if strategic decisions remain concentrated at the top level. This is so because the 22,000 employees of the enterprise will be aware of their functions, their responsibilities and authorities. Managers play key roles independent of this, of course. Consequently we have introduced the concept of "key persons"; these, among others, influence the performance of the enterprise.

[Meixner] Would you then say that developing an enterprise elite is an indispensable condition for successful operations?

[Horvath] The term "elite" has a bad taste. Let's stick with the definition I gave before: We are talking about key persons. You are correct, of course, when you say that we will distinguish these from the rest. For example, we will provide a high enough pay to prevent them from being easily lured away for financial advantages. As I said, people will be able to join this circle the same way as they may be dropped out of this circle. But it would be regrettable if the competition could lure away our most talented professionals.

[Meixner] A moment ago you said that you must care for the upper 10 percent more than for the rest. What exactly did you mean by that?

[Horvath] We established a feedback system, the essence of which is that a leader agrees with his subordinates regarding tasks, then continually checks the performance

of those tasks. This thing is primarily of a counselling character of course, rather than holding people to account. On the other hand, performing the tasks is closely related to income. Premiums may be paid only after leadership tasks have been performed. In general, income depends on the extent of responsibility.

[Meixner] Should I understand this to mean that you earn the highest salary because you have the greatest responsibility?

[Horvath] I am not employed by MATAV. But I would be placed way down on the list even if I were on MATAV's payroll.

[Meixner] You sidetracked, of course. What interests me more are the things you will do after defining responsibilities, authorities and tasks, after introducing the new SZMSZ, and when you find in the course of checking that some of your professionals had failed to perform the assigned tasks?

[Horvath] Our most difficult task is to change the outlook of our 22,000 people. This is the greatest challenge faced by managers. Probably those unable to change their outlook will have the greatest difficulty in performing the tasks. As a last resort, we will, of course, find new people to fill their positions, but other means are also available before doing so. Allow me not to enumerate these possibilities. Nevertheless, it is certain that the one who does not work, or performs his work badly will receive big slaps in the face.

[Meixner] Could you give an example for that?

[Horvath] Perhaps I need not go into details about the difficulties we had in talking from public telephones a while ago. The unit involved had been admonished and believe it or not, our revenues had increased by several million forints last year because these sets worked and because people were able to make calls.

[Meixner] When you mentioned a new outlook it has occurred to me that in developed market economies they do not concentrate primarily on whether something works, but on whether something works well. In simple terms: the cornerstone of new enterprise management is quality, and this changes the life of an enterprise in its foundations. Do I understand correctly that MATAV is endeavoring to develop an organizational system like this?

[Horvath] We are service providers, consequently quality is not a goal, it is only a means at our place. Eventually, the "total quality management" concept used at many Western industrial enterprises may also be introduced at MATAV, but this is only a part of further developing the organization. To be more exact, organizational development is not at issue, functional development is, because that's what we are dealing with. Accordingly, the centerpiece of the enterprise's philosophy is not quality, but the client. We develop the national client service system for our clients. We already have offices in every large city. This alone, however, would be too little.

In order to operate appropriately we will have to find the appropriate organization, and this is likely to be a holding corporation. This holding corporation will direct the functional and regional directorates and offices. This, too, should indicate to you that in the final analysis MATAV will be more decentralized than centralized.

[Meixner] Do you believe that this divided organization will be able to fulfill Hungarian telephone requirements by the end of 1996, the way you stated this in your program?

[Horvath] I very much hope so. It would be necessary to privatize the state enterprises and to transform them into stock corporations solely owned by the state in order to accomplish this. In other words, we should be able to continue the relentless work we have begun last August once the formal framework exists.

[Meixner] It seems to me that for some reason you are not certain about accomplishing your goal....

[Horvath] Chances of destroying our work still exist. Many believe that they could prevail if MATAV performed badly. Fortunately, our firm is increasingly becoming a stabilizing factor in the telecommunication market despite the increasingly strong competition. We succeeded in reaching cooperative agreements with most of our large competitors, and the small ones found out that it was better to work with us than without us. But I will once again stress: This market is unfathomable even by a giant like MATAV.

Telephone System Development Update

92WT0087A Budapest MAGYAR HIRLAP
in Hungarian 16 Dec 91 p 11

[Article by M.Z.H.: "An Additional One Million Lines To Be Made Available by the End of 1993"]

[Text] In the framework of its three-year program the Hungarian Telecommunications Enterprise [MATAV] will spend 120 billion forints to develop the telephone network. Between 26 billion and 28 billion forints of this amount will be expended this year, according to MATAV Deputy President Sandor Krupanics. They are also taking out a new \$120 million loan, half of which will be expended for the development of the Erzsebet Central, and the other half on the rural program. The loan to be received from the European Reconstruction and Development Bank [EBRD] will also be used for the latter program, and specifically for the construction of six rural telephone central stations. This year, 130,000 of the 200,000 (old system) telephone lines scheduled for installation over a three-year period will be placed into service. Introduction of the digital system proceeds in parallel with this installation; more than 2,500 kilometers of fiber-optic cable has been purchased for the development of the domestic network.

The year's chronicle should include the fact that the telecommunications market has truly begun to be active in Hungary. This is signaled by the establishment of the 2 billion forint capital stock Investel Company; it controls 6 billion forints in investments. MATAV has also opened up to its partners: Jointly with Kontrax, MATAV established the First Pest Telephone Company, and near Kisvarda, a similar regional enterprise to support development. At the same time two joint enterprises had been established with Instrumentation Technology; negotiations are in progress with Kontroll; Balatel's 1 billion forint program is progressing and foreign investors have also appeared. The telecommunications bond issued last fall has been bought up virtually in a matter of hours. In 1992 and 1993 MATAV plans to enliven the Hungarian Exchange by selling 10 billion forints worth of securities, according to the deputy director.

MATAV believes that the three-year program is feasible and that by the end of 1993 the number of last year's 1 million telephone stations may almost be doubled. By then the Budapest digital network will be in place, and any local telephone company establishing itself in Budapest will be able to use that network.

POLAND

Post, Telecommunications Firms To Separate

*LD3012182991 Warsaw PAP in English
1722 GMT 30 Dec 91*

[Text] Warsaw, Dec 30 (PAP)—The post and telecommunications will become statutorily separate firms as of January 1, 1992. The former named "Polish Post" will be a public utility company while the latter, "The Polish Telecommunications," a joint-stock company owned by the treasury.

The two firms will replace "The Polish Post, Telegraph and Telephone" enterprise.

The changes were introduced, besides economic reasons, to improve the quality of postal services.

Rural Telecommunications Prospects Improving

*92WT0078A Warsaw RZECZPOSPOLITA
(ECONOMY AND LAW supplement) in Polish
2 Dec 91 p I*

[Article by W.M.: "Rural Telecommunications: It'll Be Better in 10 Years"]

[Text] At the latest, in the year 2000 our rural areas should resemble the countryside elsewhere in Europe in terms of the number of available phones. Even before that, two to three years from now, localities which do not have phones at all will disappear, and villages will be counting pulses at last, said Ryszard Katanski, adviser to the PPTT [Polish Administration of Posts, Telegraphs, and Telephones] general director for telephony. This is to say that before the end of this millennium, at least an

additional 1.5 million phones will have to be installed in the rural areas which at present have 350,000 phones.

As of the beginning of this year, 4,155 localities in our country had no telephone lines, and, in numerous localities which were classified as having phones, there was only one operating telephone. According to the data of the Statistical Review of Communications and information provided by the management of the voivodship PPTT's, there were no telephones in 304 villages in Gorzow Voivodship (out of 1,071), 294 villages in Bialystok Voivodship (out of 1,406), 283 in Konin Voivodship (out of 1,422), 295 (out of 6,158 [as published]) in Sieradz Voivodship, and 268 (1,815) [as published]. Lodz Voivodship had, and unfortunately, still has, the smallest number of telephone customers; in this voivodship, not even one person in one hundred is a telephone customer. The following rank next to Lodz: Czestochowa Voivodship (1.66), Katowice Voivodship (1.78), Tarnobrzeg Voivodship (1.85), and Krosno Voivodship (1.89). On the other hand, despite the existence of communications "gaps," there are "as many" as almost five telephone customers per 100 inhabitants in Bialystok Voivodship.

The PPTT predicts that in about eight years, the telecommunications landscape of the rural areas will change beyond recognition. At that time, there will be 20 telephones per 100 residents of the rural areas (30 telephones in the city).

This year, 40,000 new telephones were to be installed in the rural areas. More of them have been installed—about 60,000. This would not have been possible had it not been for the financial effort of the residents, due to which the installation of telephones may proceed faster. In this matter, volunteer telephony committees played an important role. There are already as many as 2,000 of them, and the number keeps growing. They are formed (in the rural and urban areas alike) on the basis of an accord of the residents of a given locality who nominate representative groups from among themselves. Among other things, the committees accumulate cash. The amount of "cash contributions" made by candidate customers may vary.

Installing a phone costs 2.5 million zlotys [Z] at present. Considerably more needs to be paid, for example Z5 or Z10 million. Upon the transfer of a fragment of the circuits built with the funds of the public to the PPTT, the committees calculate costs. When distributed among individual members, such costs provide the basis for exemption from the payment for the allocation of a number. Settlements for overpayments are made in this manner, at prices in effect as of the moment the fragment of the circuits is commissioned (by a decision of the PPTT general director dated 16 August of this year). A customer may use the "privilege" for four years, or may "call away" all of the money provided on credit considerably earlier (which the PPTT appreciates).

Before a committee embarks on operations, it is worthwhile for its members to contact the proper voivodship directorate of the PPTT and familiarize themselves with the technical feasibility and real opportunities for the investment project planned. If there is such an opportunity, voivodship directorates sign agreements with the committees, "setting forth the extent of the investments which are to be made by them." It is quite significant to know that the PPTT directorates do not sign contracts which impose the obligation to allocate telephone numbers to individual committee members. On occasion, there is a lack of clarity as to this.

Funds from the budget amounting to about Z24 billion for installing phones in villages which do not have phone lines have been allocated for the first time this year. Due to these funds, about 1,000 telephones will be added before the end of this year, and the number of villages without telephones will be reduced to about 3,150. Also, Z50 billion (to be used before September of next year) has been found to develop telecommunications within the framework of infrastructural investments for territories which are under a threat of particularly severe unemployment. Due to these funds, once again from the budget, there will be more phones in some regions of Kielce, Suwalki, and Walbrzych Voivodships.

CHILE**New Communications Detection System
Inaugurated**

*PY1501005292 Santiago Radio Cooperativa Network
in Spanish 2200 GMT 14 Jan 92*

[Excerpt] A modern system for detecting the site of communications systems, which will allow the identification of unauthorized or illegal transmissions, was inaugurated today in the monitoring radio station in Santiago.

The ceremony to show this sophisticated detection method known as radio goniometry was headed by

Transportation and Communications Minister German Correa. The main idea for the implementation of this system for tracking transmissions is to prevent the action and proliferation of walkie-talkie transmissions by extremist groups and common criminals to coordinate their criminal actions and become familiar with police actions.

This is why the ceremony also was attended by General Fernando Cordero Rusque, director of the Carabineros Data and Communications Directorate. Cordero signed an agreement to coordinate and complement actions between his institution and the Telecommunications Under Secretariat headed by Roberto Plisoff. [passage omitted]

REGIONAL AFFAIRS

Cairo-Based Radio Station To Continue Broadcasts From Egypt

NC0901183092 Cairo *MENA* in Arabic
1553 GMT 9 Jan 92

[Text] Cairo, 9 Jan (MENA)—Dr. 'Abd-al-'Aziz al-Mansur, Kuwaiti Information Ministry assistant under secretary for broadcasting affairs, has announced that the Cairo-based Kuwaiti radio station will continue its operations in Cairo for the foreseeable future. The Kuwaiti Broadcasting Service in Kuwait, he explained, is still unable to operate as the voice of Kuwait worldwide due to the destruction it suffered during the Iraqi invasion.

Al-Mansur told MENA that the Kuwait-based radio is heard only in Kuwait now.

Dr. al-Mansur, who is attending the 15th Islamic Broadcasting Organization's Executive Council meetings in Cairo, added that the Islamic world must unify its views and methods to establish a place for itself amid current world developments, not merely in connection with political events but also with regard to the tremendous information and technology revolution. He said the Islamic world must keep pace.

He called on Islamic countries to pay attention to the Islamic republics emerging from the ruins of the former Soviet Union, noting that the generation which lived under the communist system must now receive attention from the Islamic world.

Al-Mansur emphasized the importance of Egyptian-Kuwaiti media cooperation and said: We will not forget the Egyptian people's support during the Iraqi invasion and even earlier.

EGYPT

Minister Announces New Telephone System

Cairo *AL-AHRAM AL-DUWALI* in Arabic
5 Nov 91 p 5

[Article by Mahmud al-Minawi]

[Text] Engineer Sulayman Mutawalli, minister of transportation, communications, and maritime shipping, announced that all old telephone offices [Centrals] in Cairo, Alexandria, and the provinces will be replaced by modern, electronic telephone offices. Also, the service in the major villages will become semi-automated in the next five years.

The minister, speaking before the Consultative [Shura] Council Committee for Industrial Production, Energy, and Labor, said that the Department of Wire and Wireless Communications is no longer a burden on the State Treasury or needs its support. It has reached financial stability through revenues gained from international

communications, which amounted to 120 million Egyptian pounds, and revenues from direct telephone calls, which amounted to 300 million pounds. The minister indicated that the Department of Maritime Shipping has become a source of financing for the state treasury, and added that railroads will be covering their expenses in the coming six years. He also announced that in 1992 a plant for the digital electronic telephone offices will be built jointly with the German Company, "Siemens," in Madinah Sittah Uktubar [6 October City] to meet local needs and the needs of the neighboring Arab countries. The German company will advance 30 percent of the capital.

Yesterday, before committee meetings on the present and future of wire and wireless communications chaired by Shura Council President Dr. Mustafa Hilmi, the minister confirmed that the number of automatic phone lines will increase to 2.6 million lines in eight months, compared to 510,000 lines in 1981. He added that the cost of a phone line in the central telephone office used to be \$438 in 1979, but it has decreased to \$230 as a result of technological development.

Engineer Sulayman Mutawalli made a reference to the Communications Department's new services, where the national information network's first phase will cover the cities of Cairo, Alexandria, and Suez. It will serve individuals, scientific institutions, banks, and tourism, and it will provide services in electronic mail, video text, telefax, bank communications, and local and international database. He further stated that to improve international services and to increase their efficiency, under-water cables linking Egypt to Lebanon, Italy, and Greece are operating. One of these cables links up with Southeast Asia, starting from Singapore all the way to France, passing through Egypt.

Agreement Signed for Niger To Receive ESC

NC1701103592 Cairo *MENA* in Arabic
1842 GMT 15 Jan 92

[Text] Cairo, 15 Jan (MENA)—The Egyptian Radio and Television Union [RTU] and Niger's Radio and Television today signed a cooperation agreement according to which Niger will receive the Egyptian Space Channel [ESC]. RTU Chairman Amin Basyuni said that engineering equipment had been installed and tested.

Arabsat Transfers TV, Communications Services to C-Band

NC0801162392 Cairo *MENA* in Arabic
1242 GMT 8 Jan 92

[Text] Cairo, 8 Jan (MENA)—Information Minister Safwat al-Sharif said today that the Arabian Satellite Communications Organization (Arabsat), has transferred all international television and telecommunications services to a second satellite, known as 1B. The original first generation satellite, known as 1A, drifted completely out of its orbit at 0800 today.

The information minister said that this means that the Egyptian Space Channel [ESC] will be transmitting on the C-band using the second satellite beginning today. ESC was previously available on the S-band used by the first satellite.

Al-Sharif said that this change is in line with an agreement signed with Arabsat to cover the transitional period, which begins today and will last until the third satellite, known as 1C, is launched on 17 February 1992. At that time, ESC will return to transmitting on the S-band.

Pacts Signed With Sudan, Morocco, Burkina Faso
NCI701083592 Cairo Arab Republic of Egypt Radio
Network in Arabic 2100 GMT 16 Jan 92

[Text] Three information cooperation agreements were signed tonight at the international conference center in Cairo.

The first agreement was between Egypt and Morocco. Information Minister Safwat al-Sharif and (Aziz Hosni), first under secretary of the Moroccan Information Ministry, signed the agreement. The agreement contains provisions for cooperation in radio and television. It also provides for Morocco to receive the Egyptian Space Channel.

Following the signing ceremony, al-Sharif praised the good relations between the Egyptian and Moroccan peoples, saying: We look forward to fruitful cooperation. (Hosni) expressed his appreciation for Egyptian hospitality and noted that Egypt and Morocco have cooperated for a long time. He emphasized the strong ties between the leaders and nations of both countries.

The second agreement was between Egypt and Burkina Faso. Al-Sharif and Salvi Charles, Burkinabe information and culture minister, signed the agreement, which contains a provision for that nation to receive the Egyptian Space Channel.

Following the signing of the agreement, al-Sharif said that cooperation between Egypt and Burkina Faso symbolizes the unity of goals and destiny of both countries. Al-Sharif said that Egypt welcomes all brothers and asked the Burkinabe official to convey the greetings of President Husni Mubarak and the Egyptian people to the president, government, and people of Burkina Faso. The Burkinabe information minister said that the agreement would allow for greater cooperation between the two countries. Charles said that Egypt and Burkina Faso share the same Islamic perspective and said he hopes for fruitful cooperation between the two nations.

The third agreement was between Egypt and Sudan. Al-Sharif and ('Abd-al-Basit Suraq), Sudanese culture and information minister, signed the agreement, which includes provisions for Sudan to receive the Egyptian Space Channel.

Following the signing ceremony, al-Sharif expressed his satisfaction over the agreement which will lead to stronger ties between Egypt and Sudan on the utilization of satellites and the Egyptian Space Channel. Al-Sharif said that the bonds between Egypt and Sudan are stronger than any agreements, adding that the Egyptians and Sudanese are one people. Al-Sharif said that we are waiting for Sudanese information officials come to Egypt to attend training courses with their Egyptian colleagues.

The Sudanese information minister said that the signing of the agreement confirms what President Husni Mubarak told him this morning; namely, that Egypt is eager to strengthen the relations between Egyptian and Sudanese peoples. The Sudanese official said that the Egyptian Space Channel would help the Sudanese draw on the achievement, legacy, and values of Egypt. The agreement, he added, confirms the long-standing relations between the two countries. The Sudanese minister said that Egyptian-Sudanese relations will be consolidated further in the future.

INDIA

Railway Police Get Wireless Telecom System
92WT0085A Madras INDIAN EXPRESS in English
27 Nov 91 p 4

[Unattributed article: "RPF Wireless System Inaugurated"]

[Text] Southern Railway general manager R. Narasimhan, on Tuesday, inaugurated a Rs.10-lakh wireless communication system for the Railway Protection Force—the first of its kind in the country.

Mr. Narasimhan said this additional facility would be a shot in the arm of the RPF, whose men "worked unflinchingly in sun and rain, sometimes being on continuous duty for three to four days, or even seven to eight days".

He paid tributes to the RPF for its dedicated work not only within the railways but also when called upon by the State police to help in maintenance of law and order during general elections, religious festivals like Mahamaham, etc.

Thanking the RPF for the cooperation he had from it, the general manager said, "RPF is close to my heart... it is one department in the railways which does not have godfathers to look after its men."

Welcoming the gathering, Southern Railway chief security commissioner S. Ganesan said an efficient, speedy and reliable communication system had been the long-felt need for the RPF. "Not a single day passes without some kind of crime or law and order problem, and during such times it is not always possible to communicate over the phone. Sometimes, the place of occurrence

is away from the railway telephone facility." It was in circumstances like these, that the wireless facility would be a great boon.

The system would cover the metropolitan city of Madras and the suburbs, and would be extended in phases to cover the entire Southern Railway network.

Mr. Ganesan said, of late, there had been a phenomenal increase in the demand on their services, particularly in aiding the State police in handling the law and order problem.

Policy Shortfall Brings Satellite 'Invasion'

92WT0083A *Bombay THE SUNDAY TIMES OF INDIA* in English 8 Dec 91 p 5

[Article by Khalid Mohamed: "A Revolution Hits Indian Airwaves"]

[Text] *Bombay, 7 Dec*—More satellites will hit the Indian airwaves in 1992. Hectic efforts are on by Non-Resident Indians based in Kenya, Singapore and the Middle East to beam programmes to the Asian sub-continent.

The electronic market is even abuzz with talk that the well-known Singapore perfumer, Dadi Balsara, is interested in setting up a satellite for the Asian region. An industrial house is reportedly striving for a tie-up with the French Canal-Plus network.

As the task of framing laws for the regulation of the airwaves has been deferred from the current winter session of Parliament, a scramble is on to take advantage of the "open sky" by electronic media entrepreneurs. A comprehensive media policy on cable and satellite will be tackled only in the Parliament's budget session in February.

In fact, the recent announcement of the launching of the first Hindi satellite channel by Asia Television Network (ATN) has evoked mixed reactions in electronic circles here. While ATN's chairman, Siddhartha Srivastva, has insisted that popular Hindi feature films, sitcoms and featurettes will be beamed to millions of Asian households, Yogesh Radhakrishnan, partner of Encore, a cable and dish antenna firm in Bombay asks, "Who will give him the software and at what price? I would take this channel with a pinch of salt."

Similar doubts are expressed by Amit Khanna, multi-media entrepreneur, who states that ATN has been linked through a UK-based company to a Russian transponder. This satellite is a geo-synchronous one and will require constant tracking, as is the case with receiving CNN programmes in India. The reception will, therefore, be "far from perfect and that's putting it mildly," Khanna adds. The reception of Star-TV programmes are crystal-clear since its channels are beamed from a geo-stationary satellite which does not have to be rotated.

A cable dealer stresses that ATN cannot be a threat to his trade. He notes, "ATN is not on DBS (direct broadcast satellite) which broadcasts directly to the subscriber like Sky Channel does in Britain. The channel is on C-Band and the antenna for this is expensive—around Rs 24,000. In addition, why should cable operators pay franchising fees for ATN? For the films and serials they show daily, they have to just pay about Rs 700 a month.

"Anyone who can play around with a few crores of rupees can rig up a satellite right now," says Jasjit Singh, another electronics specialist, "as no government permission is required to hire transponders from the existing foreign satellites. And currently there are over 20 satellites capable of entering the Indian drawing rooms."

Satellite adventures have realised that the Indian viewer's taste is overwhelmingly in favour of Hindi film-based programmes. Bids are, therefore, being made to acquire rights to popular Hindi films and TV serials. However, the question of who has the authority to sell these rights remains a vexing one. The producers would like to see the satellite phenomenon as one more "territory" to exploit while those who hold the video and cable rights are likely to say that the accruing benefits should go to them. In addition, trade pundits point out that film distributors, who earlier demanded that they should have the power to farm out cable rights, will now stress their rights to screen films over satellite.

Pundits even fear a further boom in film piracy. A cable dealer, who obviously wants to remain anonymous, discloses that he had evolved a fool-proof method to have his cake and eat it too. He admits, "A year ago, I was thinking of hiring a transponder overseas. I would have paid a piffling amount—say Rs 5,000—to the overseas distributor of a Hindi film to show it to minuscule territory like Male. I would then hook on to the transponder of one of the satellites. Legally, I would be beaming films only for Male but the signals would be received in India, too. This is certainly a grey area."

If the ingenious trick was not eventually put into practice by him, it was because, he claims, "my conscious suddenly pricked me." More candidly, he admits, "Since I am doing pretty well for myself in my business, which is booming, I opted to concentrate on things which are above board."

In the last two months, the satellite invasion is believed to have reached 3.75 lakh homes in India. Even if the four channels of Star-TV and CNN are watched by only three to four per cent of the daily Doordarshan viewership, the ratings for the alien channels is growing and could well reach a two digit figure of 10-12 per cent in the next two years.

High Speed Data Link for Software Firms Planned

92WT0082A Madras *THE HINDU* in English
7 Dec 91 p 4

[Text] Bangalore, 6 Dec—A highly reliable high speed international data link with bandwidths of up to 64 kilo bits per second will become available to Indian software companies in Delhi, Bombay and Bangalore before September 1992, according to Mr. H. Roypaul, Joint Secretary in the Department of Electronics (DoE). The rates for the service would be substantially lower than for similar services at present.

Known as the CESIA project—because of the involvement of the French public sector information technology company, CESIA—the system is able to achieve high speeds by using microwave links between companies and the gateways which the Videsh Sanchar Nigam Limited (VSNL) would establish in each of the three cities, said Mr. Roypaul. The system would have built-in fault-detection for high reliability, Mr. Roypaul said while addressing the annual convention of the National Association of Software and Service Companies (NASSCOM).

Society Being Registered

The running of the entire system, including billing, would be entrusted to a society which was being registered. The running of the society, in turn, would be left largely to representatives from the computer industry itself. Companies would have to register with the society so as to form a closed user group. Leasing of a one-way circuit for 9.6 kbps would cost Rs 5 lakhs per annum (against the present Rs 9 lakhs), 19.2 kbps would cost Rs 9 lakhs per annum and 64 kbps at Rs 15 lakhs per annum. Users would be able to get connections and opt for changes in bandwidth at short notice.

Though the system could be used to communicate with places anywhere in the world, initially access would be limited to places in Europe and North America. After the system stabilised, it would be expanded to other cities as well.

Feasibility Study

CESIA and Price Waterhouse have been commissioned to conduct a feasibility study for establishing a Software Engineering Centre at Bangalore. The Centre would be funded jointly by the EEC and the Union Government, and its aim would be to provide the trained manpower needed for high-end software projects, according to Mr. Roypaul.

Space Agency Chief Reveals 1992 Launching Plans

92WT0080A Bombay *THE TIMES OF INDIA*
in English 3 Dec 91 p 5

[Article by Srinivas Laxman: "ISRO Plans Many
Launches in '92"]

[Text] Bombay, 2 Dec—The year 1992 will see the launch of a number of important space programmes in the country, according to the chairperson of the Indian Space Research Organisation (ISRO), Prof. U.R. Rao.

In an exclusive interview to this reporter during a drive from Bombay airport to "SAMEER," a research institute, located in the Indian Institute of Technology campus at Powai this morning, he said at the end of March the indigenously-fabricated Indian National Satellite System-2 (INSAT-2) would be launched by the European Space Agency (ESA) Ariane launcher at Kourou in French Guyana.

The satellite was currently undergoing tests at ISRO's space simulation chamber at the satellite centre near Bangalore airport.

Thereafter, the satellite will be subjected to acoustic tests before being flown to the launch pad in Kourou.

As per the present schedule, INSAT-2 will leave Bangalore by the end of January and ISRO will tie-up the transport arrangements for the satellite with Air India, he said.

Accompanying Prof. Rao was the director of ISRO's satellite centre, Dr. Kasturi Rangan.

"We have a very tight schedule," said Prof. Rao. Following INSAT-2, will be the launch of Augmented Satellite Launch Vehicle (ASLV)-D2 from Sriharikota between March and April.

Said Prof. Rao: "All the modifications have been carried out and they have been thoroughly checked."

It may be recalled that after the two ASLV failures, a review committee suggested certain modifications to the launch vehicle which have now been implemented.

All the same, the ASLV launch in March is sure to be a nail biting moment for the country's space community.

The country's space chief said that some of the modifications which had been recommended for the ASLV have already been incorporated into the Polar Satellite Launch Vehicle (PSLV).

The PSLV is a four-stage launch vehicle—the first and third stage using solid propellents and the second and fourth stage with liquid propellents—which will place a 900 kg satellite in the sun synchronous orbit for remote sensing.

Asked about the possible launch period for the PSLV, he said that ISRO was aiming to schedule it at the last quarter of 1992 between September and December 1992.

Prof. Rao said that all the four stages have been tested and the results have been satisfactory.

He attributed the delay in the PSLV launch to the modifications which were carried out in the launch vehicle to ensure that the mission would be successful.

Referring to the "Gramsat" satellite programme now being devised by ISRO, he said that it was primarily aimed at helping the rural areas. A special committee had been formed to study the project, he added.

Prof. Rao said there had to be an improvement in the country's agricultural output which today stood at a bare 1.6 tonnes per hectare. "This is very low," he said. Added Prof. Rao: "A farmer must understand fertilisers and the use of too much of fertilisers was not good."

The "Gramsat" programme will aim at total development in the rural areas.

Asked about the cost of the programme, he said the satellite was estimated to cost about Rs 100 crores. What was really important was the involvement of some of the other agencies, he said.

Dr. Kasturi Rangan said a hitherto unknown aspect of India's space programme was that two satellite systems were now in orbit and both of them were performing very well. The two were the Indian Remote Sensing Satellite IA and IB.

The Geo-Synchronous Satellite Launch Vehicle (GSLV) project, he said was moving on schedule and so far between 700 and 800 computer model simulations have been carried out.

Prof. Rao said ISRO was successfully developing the cryogenic engine for the GSLV.

Foreign Participation in Telecom Services Advocated

92WT0081A Madras *THE HINDU* in English
6 Dec 91 p 4

[Text] Bangalore, 5 Dec—The Secretary to the Department of Electronics (DoE), Mr. N. Vittal, has advocated allowing foreign companies entry into the Indian telecommunications market.

Every available option should be utilised to upgrade the telecommunications services in the country to international standards within five years, said Mr. Vittal, delivering the keynote address at the annual conference of the National Association of Software and Service Companies (NASSCOM) here today.

Given the inadequacies in the manufacture of large switching equipment within the country, foreign companies, such as Ericsson and Siemens, which had shown interest should be allowed to enter the Indian market. They should, however, be asked to bring the foreign exchange required for the purpose, he added.

Another option to be explored was of permitting the State governments to use their own resources for establishing telephone networks in their States. These could be linked to the national network. These options were intended to supplement and not replace the DoE's efforts to improve its network and services, clarified Mr.

Vittal. His remarks came following complaints from the software industry that the shortcomings of the Indian telecommunications network, particularly the lack of high-speed data communication systems, were a major handicap in securing foreign contracts.

Four Earth Stations

The DoE was investing Rs 8 crores in establishing four earth stations at Bangalore, Hyderabad, Gandhinagar and Noida to be operational in about six months, to provide high-speed data links to software manufacturers. In addition, software companies could consider establishing their own earth stations. If they registered themselves as software parks, the earth stations could be brought in duty-free. Further, regulations had been modified so that a few companies could form a closed user group and share the cost of such an earth station, he added.

The Government and hardware manufacturers should see that there was one PC (personal computer) in every school, he said.

Though software exports had fallen short of the targeted Rs 400 millions, software exports had grown by 57 per cent despite all the restrictions placed during the foreign exchange crunch. Mr. Vittal also drew attention to the initiatives taken by the Union Government to encourage the software industry.

Attention to Domestic Market

The DoE Secretary also called for greater attention to the domestic market and to tap the European and Japanese markets.

IRAN

Radio Relay Station Commissioned in Lorestan LD0101142392 Tehran IRIB Television First Program Network in Persian 1530 GMT 31 Dec 91

[Summary] With the commissioning of a 10-kw relay station in Khorramabad, the inhabitants of Lorestan Province will, from now on, receive radio network programs around the clock, on 1053 kHz, on medium wave.

IRAQ

New Telephone, Telex Channels With US, Europe Opened JN0701183792 Baghdad INA in Arabic 1552 GMT 7 Jan 92

[Text] Baghdad, 7 Jan (INA)—Iraq today opened 252 new direct telephone and telex channels with the United States, Canada, and 11 West European countries, and established two television channels to receive televised news dispatches from France and Italy.

Ghassan 'Abd-al-Razzaq al-'Ani, director general of the State Enterprise for Telecommunications and Post, told INA today that the technical cadres at the al-Dujayl station have held successful rehabilitation tests with the Ristik [name as received] station in Germany. He said that the new station, which will be linked with the Atlantic satellite, whose orbital position is at 335.5 degrees longitude, held one-month tests as specified for it by the International Telecommunications Satellite Organization, Intelsat.

He added that of the new telephone and telex channels, 192 channels are linked with Western European countries, and 60 channels with United States and Canada. He said that these channels, plus the existing international telephone channels, will facilitate telephone traffic between Iraq and the outside world.

Ghassan 'Abd-al-Razzaq indicated that 31 foreign states have informed the enterprise of their consent to open direct telephone channels with Iraq. He said that the new station has been granted a certificate of qualification from Intelsat after Iraqi technical cadres reconstructed it and made it operational again in accordance with the international specifications without the help of any foreign expertise. He said separate testing programs will be launched with other countries.

On the other hand, the technical cadres in the Transport and Communications Ministry today completed the second phase of reconstructing and repairing the al-Dujayl station for space communications.

These cadres completed the construction of the new aerial of the station which has a diameter of 32.5 meters and a surface area of 1,200 square meters within a record time of three months using available and locally-made materials.

Second Channel To Begin Broadcasting 1 Jan
*NC3112194791 Baku Radio Baku Network in Azeri
1800 GMT 28 Dec 91*

[Text] The republic's television and radio broadcasting company will launch a second channel on 1 January 1992. It will be financed by the Baku City Executive Committee and will broadcast from 2000 to 2400. Viewers will be able to follow telefax reports and watch programs on evening activity in Baku. Programs for women and [words indistinct] will also be broadcast.

Yeltsin Remarks at TV Transfer Signing
*LD2712222691 Moscow Central Television First
Program Network in Russian 1900 GMT 27 Dec 91*

[From the "TV Inform" newscast—video shows Yeltsin and Yakovlev at the signing ceremony]

[Text] Russian President Boris Yeltsin signed a decree today which, I think, is important not only for us but for TV viewers as well. The essence of the decree is to abolish the All-Union State TV and Radio Broadcasting Company and to form on its basis the Ostankino Russian State TV and Radio Company. To entrust the Ostankino TV and Radio Company with the coverage of the political, economic, and cultural life in the member states of the Commonwealth of Independent States. To entrust Yegor Vladimirovich Yakovlev to present to the Russian Government proposals on the reorganization of the Ostankino State TV and Radio Company.

We really had a light moment today since there is an instruction in the decree: The Russian Government is to ensure the transfer of the state property of the All-Union State TV and Radio Broadcasting Company and associations, enterprises, and organizations in its subordination situated on the Russian territory to the Ostankino Company; jointly with the governments of the member states of the Commonwealth of Independent States to establish TV and radio broadcasting procedures for the Ostankino Company on the territories of these states; to consider the issue of creating a joint-stock company on the basis of the Ostankino State TV and Radio Company, and to attract as shareholders all involved member states of the Commonwealth of Independent States, juridical persons, and citizens; and to envisage distributing programs from the Ostankino State TV and Radio

Company in volumes and on the conditions agreed with the governments of member states of the Commonwealth of Independent States, providing radio frequencies for it and also financing the activity of the company for the period of its reorganization in 1992.

[Begin recording] [Yeltsin] In accordance with your request, Yegor Vladimirovich, and taking into consideration the true situation that currently has taken shape, when the Union as it is has ceased to exist and the Commonwealth of Independent States has appeared instead, and since your TV company is situated on Russian territory, therefore it should be Russian. In this connection I am signing a decree. Taking into account, of course, that being Russian and namely a TV company and at the request of your collective, let it be called the Ostankino TV Company but it will, of course, reflect the life of all the states of the Commonwealth. Though, of course, you will be under a certain protection by the Russian president. If there are any technical, financial, or other problems, you will not be able to do without us. Then you will have to come to the Russian president and ask him for something. I am always ready to see you or to come and see the collective, this option is also possible, of course, and it is even necessary, I think. Therefore, I wish you good luck and wish that at this very difficult time indeed, perhaps, you will show not only the black but also some light features that we have. However, the right to criticize everybody, including the president of Russia, remains with you and I will bear no grudge, providing, of course, there are no insults. I can assure you of this. [end recording]

'Kosmos TV' Offers European, US Channels
*LD2512110991 Moscow TASS International Service
in Russian 1158 GMT 22 Dec 91*

[Text] Moscow, 22 Dec (TASS)—The "Kosmos TV" Soviet-U.S. joint venture is offering eight European and U.S. television channels, in addition to the five Soviet channels, reports DELOVYE LYUDI's December issue. You can watch news, music, sports, and children's channels for 100-150 rubles per month. A nighttime channel and new feature films will be available only to viewers who have freely convertible currency, the magazine writes. The sole Soviet partner in "Kosmos TV" is the Ostankino television center, with six companies making up the U.S. side. They must serve at least 100,000 subscribers to show a profit.

REGIONAL AFFAIRS

Telecommunications Subsidiary To Be Set Up in Belgium

LD3112145191 Helsinki Suomen Yleisradio Network in Finnish 1100 GMT 30 Dec 91

[Text] Posti-Tele [post and telecommunications] will enter the telemarket of the European Community. The Council of State today gave Posti-Tele permission to establish a subsidiary in Belgium. The company will offer telecommunication services to Finnish enterprises operating on EC territory. The company will begin its operation in Brussels at the beginning of the year.

Radio Netherlands To Alter English Schedule

LD1301092392 Hilversum Radio Netherlands in English 1150 GMT 9 Jan 92

[Report on recorded interview from the "Media Network" program with Radio Netherlands' Director General Minne Dijkstra by unidentified correspondent; place and date not given]

[Text] We're currently preparing to make some major changes to our English-language output as from the summer schedule—that starts on Sunday 29th March. That will of course affect other language services too. We've noticed from the mail that people prefer longer broadcasts. No one expects to listen to one international broadcaster for, let's say, three hours a day, but putting several one-hour transmissions together does make it easier for the listener to dip in and out, as it were.

Audience research has shown that our English language transmissions to Asia at 0830 and 1130 UTC [Universal Time Coordinated] are somewhat on the early side for many listeners. So, we've decided to create a new three-hour English block running from 1330 to 1625 UTC. The first and third hour will be the same and the hour in the middle will carry a different feature program.

Our timings to the Pacific appear to be OK, but at present the 0730 UTC transmission is simply repeated twice, directly from the Bonaire relay station. This will change to a live feed from Hilversum allowing for us to make more up-to-date programming and variety, too, on our service to the Pacific.

The African transmissions are also being moved together, eliminating 1630 and 2030 on the air at the moment; a new three-hour transmission will start at 1730 UTC and last throughout to 2020.

To North America, the single one-hour blocks remain at 0030 and 0330 UTC for this summer season, but completely new is a three-hour morning release to Asia starting at 0030 UTC and going on to 0325. You may remember the very positive test transmissions we conducted last August. Well, they're now going ahead into a regular transmission.

Mind you, hardly a day goes by without letters or Faxes coming in to our office asking about our English service to Europe. Our shortwave transmitters are simply too close to the UK and Ireland to give adequate service in the evenings and our Flevo shortwave transmitter site can't broadcast at frequencies lower than the 49 meter band. A possible mediumwave service has been floated several times, but at present this can't be realized because of usage by the Dutch domestic radio organizations. We're still hopeful that things might change, but not for the summer period of 1992.

Rather than struggle on offering a second-rate coverage, we've decided to suspend our European service in English at 1130 and also the release at 1430 UTC. We're now part of a project to set something up to replace it.

In his new year address to the company this past week, Radio Netherlands' Director General Minne Dijkstra has been outlining quite a lot of new plans. I asked him whether the problems affecting Dutch public broadcasting domestically, will mean budget cuts to our external broadcasting activities, i.e. Radio Netherlands.

[Dijkstra] Possibly, but not necessarily. In any case not in '92 and as far as I can see also not in '93. The total annual budget for domestic and international public services is sufficiently safeguarded for the next two years and afterwards I fear financial problems can become a [world indistinct] indeed.

[Correspondent] So two years, no problems?

[Dijkstra] Two years of relatively no problems. But I think the reorganization of the totally outmoded and inflexible domestic systems is the most urgent problem to be solved politically and the hesitation to do this shown by the politicians of the main political parties in the country worries me most really.

[Correspondent] That reorganization, when and if it comes, may mean a new role for public broadcasting here. In many European countries the external radio service is simply a few rooms within a much larger broadcasting complex designed to serve domestic listeners and viewers. Isn't there a danger then that funds to keep a thirsty domestic television system running may be siphoned off from external broadcasting?

[Dijkstra] Not yet, and as far as I can see, never. We are not a part of the domestic organization but an (?actually) autonomous organization brought into life by law. This is a very important situation for us and as far as I can see there are no serious proposals whatsoever to change this and we are of course underlining that this is no necessity, because there's no real gain in changing our autonomous position.

[Correspondent] Mind you, this time last year we had bad news that the minister wasn't planning to finance a new relay station in Asia that we were going to build together with the BBC. Has that project definitely now

been scrapped and, in fact, are there any other ways of improving our signal to Asia?

[Dijkstra] That was real bad news indeed, but the project has definitely been scrapped because it would be very unrealistic to expect a change in the opinion of the minister. We hope to find other solutions, of course, to improve our signal to Asia rather soon. Obviously, these solutions are less preferable and only a second choice. We hope to buy airtime on transmitters which are suitable for broadcasting to Asia. A second option is to make swaps and we are taking steps now to get permission to use our Flevo site here in Holland for this purpose.

[Correspondent] In other words our Flevo transmitter site could relay other broadcasters?

[Dijkstra] We could relay other broadcasts and we could use their transmitters in that part of the world for our own programs.

[Correspondent] Deutsche Welle, Swiss Radio International, Radio Sweden and the BBC are some of the European radio stations who've now taken out the satellite option. We mentioned that Radio Netherlands management was also considering it. Well, one decision's already been taken. You may know that we use the Intelsat satellite system to get our studio signal from Hilversum, Holland, to our Caribbean shortwave relay station on the island of Bonaire. As from March, we'll be installing our own satellite uplink dish here in Hilversum, so we can send signals up to another satellite serving the Caribbean, namely PanAm Sat. By using two feeds, sometimes with a different program, we'll be able to make more efficient use of the transmitters on Bonaire.

Minne Dijkstra also points out another advantage.

[Dijkstra] In doing so we have created the possibility to bring our signal not only to our own relay station, but at the same time to local radio stations in the Caribbean area and in the northern part of Latin America. We are preparing now negotiations with local stations interested in rebroadcasting parts of our programs. We'll do this for at least two years so we have to evaluate this project in '94.

And on the other hand we have plans for a new European program from this country. I'll hope we can go on satellite in due time, but I'm not very sure what due time is now, with a program in Dutch and at least in English, to reach our audience in Europe better than we can do now.

[Correspondent] So, in other words, we say goodbye to shortwave as for example the new summer schedule with English to Europe, but there are plans to bring it back let's say with satellite?

[Dijkstra] That's quite correct. I think shortwave has no future in Europe and we have to use other means of communication with our audience.

[Correspondent] Radio Netherlands has so far escaped budget cuts partly because of successful publicity campaigns here in Holland explaining what we do and how Dutch tourists travelling abroad can keep in touch with home. One in four Dutch travellers crossing the border right now takes a shortwave radio with him or her.

But look what's happening around us. The BBC's turning its World Service into a news and current affairs machine with the launch of a third "News Hour" program in February. It also has started television. Deutsche Welle in Germany is using the resources of RIAS and Deutschlandfunk to build up a television service alongside radio. Is there really a future for international radio broadcasting then? And since this is the year of European integration, shouldn't it be left to larger European countries with more resources to speak on our behalf?

[Dijkstra] I am a strong believer in the future of radio. Of course TV, and especially satellite TV, will take a bigger part the attention and time of our audience in the future, but radio as a simple and cheap and fast means of communications has a future—in third world countries first of all, but also in North America, in Europe and other rich parts of this world. And there is no single reason to let the British or the Germans or the French for instance, to speak on our behalf. Within the European Community charter there is the policy of culture pluri-formity an important element. We are planning to go on satellite as I said, with a new European program in Dutch and at least two in English. And outside Europe we have our own responsibility as a country to communicate to broad audiences and in this way adding to a broad flow of international information.

Radio Netherlands Plans New European Service

*LD1301094292 Hilversum Radio Netherlands
in English 1130 GMT 10 Jan 92*

[Text] Radio Netherlands has plans to start up a new European service which will be able to be heard all over Europe. It will be a joint project for the domestic Dutch radio stations. It is hoped the new service will be on the air for 17 hours daily, broadcasting news and entertainment programs in Dutch and English. In announcing the project, Radio Netherlands management stressed that the new service will not replace the current shortwave transmissions, which will continue as before, both inside and outside Europe. As long as there are no satellite radio receivers on the market, they say, shortwave will continue to be the way many people throughout the world have free access to information, something that's particularly important for those countries where there's no freedom of speech.

CYPRUS

CYTA, Lebanon Sign Agreement on Fiber-Optic Cable

*NC1801183392 Nicosia Cyprus Broadcasting
Corporation Radio Network in Greek
1130 GMT 14 Jan 92*

[Text] The Cyprus Telecommunications Authority [CYTA] has signed a cooperation agreement with the

Lebanese Telecommunications and Post Ministry providing for the joint installation of an underwater fiber-optic cable to serve the telecommunication needs of both countries. The new system is expected to be operational in mid-1994.

DENMARK

Big Advances Seen for EDI, VANS Networks

92WT0068A Copenhagen BERLINGSKE TIDENDE
in Danish 2 Dec 91 p 7

[Article by Asbjorn Jorgensen: "Growth Occurred Three Years Later Than Predicted"]

[Text] Electronic document interchange was predicted to undergo extraordinary growth during the late 1980's. The boom never arrived. Things are only now starting to happen, and developments are completely different than expected.

From the beginning, Dannet was one of the largest investments in the history of the Danish EDP world. The telephone company KTAS and the EDP firm of IBM invested 100 million kroner in the business in Birkerod, north of Copenhagen, and over the first few years they saw tremendous losses.

However, the company was preserved through its rocky start, and the most recent accounting figures show an operation which is coming around. Profits of 10-15 million kroner are budgeted for next year.

An incorrect guess is the reason for the delay. Too many of the wrong types of employees were hired too quickly.

The incorrect guess was a prediction that, in the key area of EDI—electronic interchange of documents with the help of a number of international standards—there would be 10,000-15,000 companies using the service by this year. In actuality, there are probably less than 1,000.

Dannet had perceived itself as an EDI switchboard, a type of telephone company, through which data communications between the various user companies could be ordered. Dannet consequently assembled a number of EDP people with expertise in communications, so that the company could translate the signals from the broad spectrum of various EDP systems used by their clients and send them on to their destinations.

Nothing ever came of this. The number of clients fell, because there were no applications programs available to make it easier for them. The international EDI standard codes were not enough.

But growth is now happening in another direction. Now businesses want to have their own EDI solutions. Pharmaceutical and medical companies want to do business electronically. Steel suppliers' communications with

Danish industry are to take place via desktop computer. The entire automobile industry wants to order and pay via EDI.

Insurance companies and the Customs Service have already gone that route.

"We blindly believed that the companies which normally provide EDP solutions for Danish industry would immediately come out with a lot of EDI software. It didn't happen.

"Probably because they knew a lot about cutting costs and so on, but nothing about communications. It was just the opposite with us. That's why one of our company's areas of interest is in serving as consultants," said managing director Agner Mark.

"Now it is coming in piecemeal. Either an entire industry gets together to find possible savings, or one of the major companies will get involved, and then slowly brings its subcontractors into the picture."

Agner Mark became director a year ago, and since his arrival he has done some bloodletting on the company, which had exhibited clear symptoms of growing pains. The number of employees was cut from 149 to 133. Personnel on loan from owners KTAS and IBM were sent back, but the number will climb back up to 150 next year.

Changes Needed

Mark gives another explanation for why EDI had to wait: "Back in 1988-89, many people were saying to themselves: Electronic communications and document interchange, that for us, it's a good strategic move for the company, it can make us more competitive. But it requires tremendous changes to implement EDI in an organization, changes that can appear to be overwhelming."

It was not because examples of EDI success stories were lacking. Banks were handling their transactions with one another long before EDI became a buzz word.

And a firm such as Volvo simply cannot place the blame for its economic problems on its EDI effort. Enormous sums and storage areas are saved, and delivery times improved, because the company communicates and places orders via EDP with its subcontractors the world over.

Volvo is also an example of how the big companies work when the system is to be changed over. The message from the Swedish auto manufacturer to its suppliers was crystal clear: Either we do business and place orders entirely electronically, or we are through as partners.

Dansk Supermarked, FDB, DSB and KTAS may not be saying it quite so directly, but they are nevertheless trying to get the same message across to their suppliers/clients.

An essential reason why electronic document interchange and communication can be a success is that it allows everyone to talk with everyone else.

Therefore, those who profit most from VANS—value-added network services, which also handles, for example, normal electronic mail—are often one another's clients, so that companies on one network can come into contact with companies on another network.

Included among the larger VANS companies in Denmark are CMA, Landbruget's [Agriculture Department] EDP Center, IBM, Maersk, Datacentralen, Comlink (the West Danish telephone company's counterpart to Dan-net) and Kommunedata.

FRANCE

France Telecom President on Debt Reduction Strategies

92AN0025X Paris ENTERPRISES & TELECOMMUNICATIONS in French Oct 91 pp 78-81

[Interview with Marcel Roulet, president of France Telecom, by Herve Marchal; place and date not given: "Overall Balance Is a Priority"]

[Text] Those fearful of France Telecom getting delusions of grandeur can stop worrying. Its independence has not gone to its head. With a good year behind it, the French national group has one main aim: to rebalance its finances through massive debt reduction. However, it must also turn two strategic gambles into commercial successes. One of them is its digital mobile telephone, which should be no more expensive than Radiocom 2000. The other is business communications, which involves the setting up of truly European networks: sound, serious, and German-style.

[Marchal] Talks on the draft contract with the government, a contract which will bind France Telecom for four years, appear more taxing than expected. What is the situation to date and when do you think the contract will be finalized?

[Roulet] If all goes well, the draft contract should be submitted to the board of directors during October. It should therefore be signed by the beginning of November at the latest. In regard to the time taken, which to you may appear rather lengthy, let me emphasize two factors. On the one hand, the draft contract is the first ever drawn up for France Telecom. And it is my observation that its preparation has taken place within an entirely new, more deregulated context. On the other hand, there were very important basic problems; the various options had to be examined and positions ratified. Agreement on objectives was reached quickly. However, the various parties did not see eye to eye about how to put them into practice. There was, I believe, a fairly interesting discussion on finding the right balance between debt reduction, maintaining a real level of

investment—and thus, in the long term, the same degree of competitiveness—and the development of our rate structure, our diversification policy—particularly in international terms—and our social policy.

[Marchal] Did the government act as a partner or as a regulatory authority in this matter?

[Roulet] The government is our regulator, but at the same time it must be our partner. I could not say that it is a shareholder, as we have no capital, but it controls the organization in that it nominates the president and most of the members of the board of directors. However, the government must be responsible for the future of France Telecom. The main difficulty in drawing up this first draft contract has been to ensure that it is what it ought to be and nothing more. From time to time it is mistaken for our work schedule or even for our business plan. I must remind you that the draft contract is the contractual framework within which the government fixes our goals. The draft contract will thus lay down a certain number of parameters in order to determine whether we are achieving these aims. To sum up, it is a question of developing our activities—meaning our sales figures—in sound economic conditions—meaning the profit margin debt level—and increasing customer satisfaction, which is the ultimate aim of our service. Finally, our social policy is aimed at ensuring that these goals are achieved with a satisfied staff which derives benefit from its efforts.

[Marchal] Jean-Marie Rausch, the post and telecommunications minister, has just announced that you will invest Fr 150 billion over four years. In which fields?

[Roulet] This figure is a projection of our current rate of investment with a modest increase in amount each year. As always, most of the money will be spent on our traditional activities, particularly the telephone service. We are going to continue with the digitization of our network; this should be completed in 1995. We will continue setting up a national fiber-optic network. We will improve the quality of service, mainly by extending Numeris [ISDN—French integrated services digital network]. We are devoting considerable resources to mobile telephones, which are part of our "front line." This is one of the fields where we are completely competitive. Very rapid changes are at hand. We are going to change to digital technology with the deployment of the mobile telephone based on the Special Mobile Group (GSM) standard. Of course, we are going to push on with the cable plan and continue developing videotex. We will increase the diversity of add-on telephone services (of the call forwarding or signaling type). And we will turn our attention to business networks, which represent our second area of competitiveness and strong development. Businesses have international requirements and want increasingly integrated solutions. This is the main reason for our international policy, which is based on partnership allowing us to follow our customers abroad.

[Marchal] British Telecom (BT) has just launched a major offensive in the field of networks for transnational businesses, consisting of setting up a network with the Japanese and Germans. This is aimed at you.

[Roulet] In Europe, the interesting and difficult aspect of the relationship between the traditional telecommunications operators bodies is that we are both partners and competitors. We have been partners for a long time and will remain so in the future with, for example, the ongoing introduction of synchronous transmission networks. For us a fundamental requirement is to build a homogeneous European network through a sufficiently close partnership.

However, at the same time we have become competitors in a certain number of fields. BT, which benefits from the presence of headquarters of numerous major firms in the United Kingdom and the importance of the City, quite naturally has ambitions to be the leader in the field of business networks. It thus has projects in this field, Pathfinder being an example. France Telecom feels that it is necessary to move faster toward harmonization than toward competition. We are not against competition. However, it would be absurd not to devote most of our efforts to ensuring that there is first of all an open, homogeneous, and coherent European infrastructure. This is why, with our German counterpart DBP Telekom, we have developed a fairly close partnership, particularly in the field of value-added services through our joint subsidiary Eucom. We believe that answers must be found to the problem of business networks in the form of open solutions which will speed up the creation of truly European networks.

[Marchal] From the moment at which agreement is reached according to BT's wishes, what could happen?

[Roulet] The important element is IBM's part in this agreement. In any event, alternative solutions are available to us. I often remind people that 75 percent of our international traffic occurs in Europe, speaking in the broad sense. So for us the priority is Europe. Also no single operator can claim to be worldwide. Several partners are needed. Over the next five years such a partnership will probably be set up. For the moment, matters are fairly undecided.

[Marchal] One last comment on the subject of BT. France Telecom has been obliged to incur sizable debts. How are you considering dealing with this problem in order to maintain an acceptable level of competitiveness as compared to the other major operators?

[Roulet] This is one of the main aims of the future draft contract. It is a question of reducing our financial expenses and giving priority, next year and for the following 3 years, to reducing our debts in order to bring them down to the debt and financial cost levels of our partners and competitors. Our debt level, of course, is a handicap which would become really serious if allowed to continue beyond 1993. This has been my argument and I think that it has struck home. Whatever our aims

may be, restoring our financial position must come first. This is the priority of the draft contract.

[Marchal] What is France Telecom's total debt at the moment?

[Roulet] Around Fr120 billion. This is too much. It means that debt servicing represents approximately 11 percent of our expenditures. This is why we hope, by the end of the draft contract, to have reduced it to below 7 percent.

[Marchal] And meanwhile BT is at what level?

[Roulet] A little more than 3 percent. In 1990 it reduced its costs, which were 4.8-4.6 percent, to 3.2 percent. There lies the challenge.

[Marchal] Within France Telecom, are the staff, other than higher management, aware of the importance of the draft contract?

[Roulet] Completely. Eight years ago we had already discussed what was known as the charter. At that time, I was already struck by the clear thinking of all our staff on the subject of this strategy. The reason was quite simply that it was a question of concepts and ratios which were discussed openly and which, consequently, were familiar to them. I think that the same will apply to the draft contract. Nearly every month I visit a facility and hold discussions with the executives. And I am always very impressed by how well the staff on the spot understand what is at stake.

[Marchal] How great a share does research and development (R&D), which is an essential activity in terms of preserving future growth, have in your investment strategy?

[Roulet] Our R&D effort will have to represent at least 4 percent of our sales figure. If, as we predict, the latter grows by 7 percent, R&D will grow by the same percentage. We are currently at a good level compared to AT&T, Nippon Telephone and Telegraph (NTT), BT, and Deutsche Telekom. The most difficult thing is to strike the proper balance, within the R&D budget, between short- and long-term R&D. One of the specific features of telecommunications is that the market is technology-led. It is thus necessary to have a good understanding of the technology in order to make the right choices. When, around 20 years ago, France made the right choice in opting for digital systems, it was because, with the National Center for Telecommunications Studies (CNET) it had the resources to give it a clear view and allow reasonable anticipation of the future. Today, with the example of asynchronous time switching, which will be the basis of very-high-speed switching systems after 1995, it is public knowledge that the concept and CCITT standards were inspired by our research at CNET Lannion.

[Marchal] On the subject of mobile telephones, we are waiting impatiently for the GSM system, which will

make it possible to telephone all over Europe from a car. Do you already have an idea of the cost and of user rates?

[Roulet] GSM is a European standard which does indeed offer the possibility of using one's terminal across national borders. However, mobile telephones are a complicated technology and will remain complicated. When you have 20 million mobile telephones constantly crisscrossing Europe, it must be possible to track a mobile telephone each time it is being called. This requires real-time management of a huge database. A drop in prices will be essentially centered on terminals. I think that we can reckon on a 50-percent decrease over five to seven years in terms of today's currency values.

A very striking feature of countries where mobile telephones are most developed is that, after the initial craze, people expect, for example, a message service enabling you to know, on returning to your car, that you have been called and whom to call. With intelligent networks there will be a profusion of new developments. If you call someone whose line is busy, it would be very practical if by pressing a button the number could be redialed as soon as the other person is free. One can also imagine a service which filters calls; for the next hour, you could indicate the only numbers from which you will accept calls. The main difficulty will be to make progress at user level in simplifying the various operations. What people want is to press one button and nothing more. Or else to have a screen telling them what to do. Much work is still to be done in this respect, and is under way.

[Marchal] Will GSM be much more expensive than Radiocom 2000?

[Roulet] It should not be more expensive.

[Marchal] What about Teletel: Do you find the results satisfactory?

[Roulet] We have entered a cruising phase, with practically 75 percent of companies using minitel. We now think that we must optimize the network, with much faster transmission in order to respond to client demand.

[Marchal] On this subject, a study by Coopers & Lybrand quoted by COMMUNICATIONS WEEK reports that the overall cost of the operation in the year 2000 will reach \$9 billion. And it does not foresee any return on investment before 1996-98. Can you confirm this?

[Roulet] The study that you mention has not yet been completed. However, the order of magnitude of the overall cost is probably correct. It is necessary to keep in mind that in the same period, income from videotex will also have been considerable: probably near to \$10 billion. To this should be added the very great benefits to the economy: profits to manufacturers, servers, and the government. Since 1989 our annual income has exceeded our expenditure. Not only has Teletel allowed our fellow citizens broader and faster access to the potential benefits of the modern world, it is also an operation through which we have learned much in terms

of marketing. On the whole it is a success. It is not by chance that, today, we are world leaders in marketing ISDN (called Numeris in France).

[Marchal] Talking of Numeris, what is France Telecom offering to small- and medium-sized companies and manufacturers with this?

[Roulet] Numeris is entering into a massive distribution phase. France Telecom is today offering new commercial possibilities with more services, a greater range of terminals (small-size Numeris PABX's), and a more favorable rate structure (a 50-percent decrease in local rates and 10 percent less for long distance). In rental terms our terminals will also cost less; some 20 percent less in the range of Phonis telephones.

Furthermore, France Telecom has just signed a partnership agreement with Metrologie with regard to marketing Teledisquette, a package-based file transfer system. Particularly easy to use and with the advantage of a preferential rate, this product should be very successful with small- and medium-sized companies and manufacturers. Today, having sold more than 100,000 B channels, Numeris is confirming its success.

[Marchal] Does France Telecom have an industrial policy? Do you accept that your resources should be used to cover the operating losses of Bull or Thomson?

[Roulet] We are aware that, by reason of our size, our position, and the field in which we work, the consequences of our choices (standards, equipment, purchasing policy) go beyond our own interests.

Secondly, we are offering a service. And in the field of telecommunications, services constitute 80 percent of the market, industry 15 percent, and installation and maintenance 5 percent. With companies such as Bull and Thomson, in which we are shareholders, we shoulder the responsibilities of a shareholder but have a partnership to develop as far as services are concerned. For example, we have indicated that we would be reference clients of Bull for its new distributed computing system. With Thomson, this type of scheme can be envisaged in the field of HDTV [high-definition television].

Furthermore, we are trying to meet the requirements of our clients, who want increasingly integrated solutions and we are also attempting to accelerate the development of value-added services (VAS's). Hence, as you have noticed, there have been a certain number of initiatives as regards computer services companies, the latest being the takeover of SCBF. Why? Because it is active in the banking and financial field, which is a major consumer of telecommunications. We thought it necessary to have a good understanding of that market. Of course, since SCBF was well managed we have kept the existing teams. Our aim is not to manage companies, but that their strategy should match our own.

[Marchal] Are you thinking of Cap Gemini?

[Roulet] Cap Gemini is a possible partner; it remains to be seen whether this partnership is compatible with the strategy of their new and powerful partner.

[Marchal] Is it correct that you had been in contact with Cap Gemini even before Daimler Benz was approached by Cap?

[Roulet] That is incorrect. We did not have an opportunity to refuse an offer of partnership at the time of which you are speaking.

[Marchal] And since then, have you had any real and serious contact with them?

[Roulet] Yes...exploratory contact....

[Marchal] You are smiling.

[Roulet] No. At France Telecom we always try to take things seriously.

[Marchal] Is the dialogue real or false?

[Roulet] It is not a false dialogue, but we need precise replies to precise questions in order to be certain that our strategies will be coherent.

[Marchal] Does the presence of Daimler Benz bother you much?

[Roulet] Not necessarily. However, it would be interesting to know what Daimler Benz's ambitions are in the field of telecommunications services in Europe. I should remind you that Daimler Benz was a contender, along with the American concern Nynex, for operating a mobile telephone communications network in Germany. Daimler Benz is a very reliable, very powerful, and very well managed group, which it is better to have for you than against you. However, if it is potentially our competitor in the long term it is better to know beforehand.

[Marchal] And does the government understand this?

[Roulet] I think so.

[Marchal] In the coming 10 years you want the share of international business in your turnover to be 10 percent. How are you going to achieve this?

[Roulet] For France Telecom it is a question of maintaining or increasing competitiveness and diversifying into services in order to capture new market shares. These aims dictate a dynamic policy of expansion abroad, but without forgetting our basic job which is to provide a high-quality public service in France. Achieving 10 percent of our sales figure abroad or via foreign partnerships by the year 2000 is already an ambitious objective, which should be achieved under satisfactory conditions of economic profitability and integration with our overall strategy. Setting a more ambitious goal would, in my opinion, be totally unrealistic right now and, furthermore, there is no major operator today which comes anywhere near this figure of 10 percent.

[Box, p 80]

A Major Group Up Against International Competition

Our national telecommunications operator has just been through an historic year: 1990 saw a change in its status. France Telecom has become a public company with a separate legal personality from that of the government. As if to accompany this milestone, its turnover has exceeded Fr100 billion (to which should be added Fr12 billion from its subsidiaries). And the Numeris network covers the whole of the country—a worldwide first. Below are the other key statistics of a group which is fifth in the world behind NTT, AT&T, DT, and BT, and which must now face up to some tough international competition.

Workforce: 156,615 people (France's sixth biggest employer). Telephone network: 28 million lines. Network: 80 percent digital. Phone cards: More than 100 million sold from the outset (two-thirds of the income from public telephones). International traffic: 75 percent in Europe. Minitel units: 5.6 million. Teletel traffic: 98 million hours connect time, including 20 million for the electronic telephone directory. Mobile telephones: 230,000 subscribers (5 for every 1,000 inhabitants; in Great Britain the figure is 20 for every 1,000). Companies: 49 percent of traffic. Leased lines: Fr5.8 billion, France Telecom's second most important product after the telephone. Fax: Fr4.2 billion. Profits: Fr5.5 billion. (1990 figures; source: France Telecom.)

Broadcasting Council Formally Records La Cinq Bankruptcy

LD0201095292 Paris France-Inter Radio Network in French 1600 GMT 31 Dec 91

[Text] The Higher Broadcasting Council [CSA] has formally recorded the filing of the balance sheet of La Cinq [television company] given the fact that La Cinq has found it impossible to get together the necessary finances to operate and to respect its obligations. The CSA says it can only formally record the filing of the balance sheet of the channel, even if it deeply regrets the consequences. Stressing that the management of La Cinq has given an assurance that if it is liquidated all the rights of the staff will be preserved, the CSA says that it has asked the Hachette Group to ensure, in this case, that no possibility for redeployment within the group will be neglected.

GERMANY

Status of German Telecommunications Reviewed

92MI0061X Duesseldorf HANDELSBLATT in German 25-26 Oct 91 p 25

[Article by Rolf W. Goering: "What Telecommunications Should Be Achieving in Germany"]

[Text] "The year of change, the year of new departures": This was how DBP [Deutsche Bundespost] Telekom triumphantly headed its first annual report, which

recounts the successes of 1990: Nevertheless, other views could be heard at a conference of various associations: for example, that its charges were the highest in the world; that broadband availability was too narrow; that Germany was lagging 16 years behind the United States; that competitive pressures posed a threat; that research was losing status internationally; and that, even in the area of speech communication, deregulation was urgently needed.

The AGF (Association of Major Research Establishments), the (BDI) Confederation of German Industry, and the DFN (German Research Network) Association were the hosts at the state of telecommunications in Germany. Professor Dr. Gerhard Seegmueller of the AGF said that, as modern industrial society depended on the rapid exchange of information and data, broadband communications had become a political issue in the United States, in contrast to Germany. He estimated that the Federal Republic would take 15 years to catch up with the United States.

Dr. Carsten Kreklau stressed that the BDI also viewed telecommunications as a key function whose importance in the coming decades would exceed even that of the automobile industry. He stated that communications had traditionally been a rigid sector in Germany. It was becoming increasingly dependent on component manufacturers, who were frequently not located in the Federal Republic, or even in the EC. Telecommunications, he said, had become a siting factor, and without adequate provision Germany would become a second choice location.

Generally, participants felt that postal reform had been only a half-measure; deregulation should have been taken further and extended to the telephone and network services. Professor Witte, who had chaired the commission, stated that, when the recommendations to the Federal Minister of Posts had been drafted, the votes were evenly divided for and against full deregulation. In the end, a political decision had been taken.

Carl-Friedrich Meissner, a board member at Telekom's head office in Bonn, cited an example illustrating the present situation: He described the attitude of a Bundestag deputy who had declared himself in favor of complete deregulation (abolition of the monopoly), provided that telephone charges in his constituency did not rise above 0.25 German marks.

The great importance of telecommunications was described by DFN Association chairman Professor Dieter Haupt. The association's aim, he said, was to ensure that computer-assisted communication at affordable prices was available to all its members in research and teaching, who currently numbered 230. The Telekom-operated network enables the total computer capacity available in the major research facilities to be linked up as a single computer, and makes it possible for interregional research teams to be created.

Criticism of High Data Transmission Charges

The transmission broadbands for such projects are in the 34 Mbit/s to 500 Mbit/s range. The DFN feels however that the charges for the 2 Mbit/s network currently available are only justified for 100 Mbit/s lines and that, compared with those in the United States and Japan, scientists are at a considerable disadvantage as far as experimenting with transmission and switching methods and distributed systems is concerned.

Telekom's excessive costs were also putting industrial users at a competitive disadvantage, complained Klaus Schulz from Volkswagen AG in Wolfsburg: The 2-Mbit/s output charge was 20 times higher in Germany than for 5 Mbit/s in the United States, he said.

The harsh criticism from participants placed Carl-Friedrich Meissner, Telekom's representative at the conference, in a difficult position. The euphoria over the successes of the company's first year after the Postal Structure Law of 1 July 1989 had entered into force had hardly prepared him for such attacks. He did point out, however, that Telekom was ultimately a federal authority rather than an independent company; it was owned by the Federal Government, to whom requests should be addressed. The current scale of charges, he said, dated from 1988, though the supervisory board had drawn up a new package of charges that were pending adoption.

Basically, charge rates needed to be reversed, he stated: Local calls were too cheap, and trunk charges were too expensive. Furthermore, as a public service Telekom was not in a position to act like an independent company. Telekom was planning a network with a monopoly on variable transmission speeds ranging from 9.6 Kbit/s to 2 Mbit/s; higher transmission speeds would not be covered by the monopoly. In considering Telekom's achievements, due account should also be taken of reliability and quality, felt Meissner.

Meissner estimates the annual growth in data traffic at 20 percent and in speech transmission at 8 percent. ISDN (integrated services digital network) takes on greater importance from 1995, though broadband ISDN would take until the year 2000. Meissner sees future prospects in office communications which provides network services for facilities ranging from the individual PC workstation to office centers; a partner is still being sought.

The papers revealed that Telekom too, is still in a state of flux. The long years of monopoly concealed many problems. Decisionmaking was shared between "the Post Office and Siemens," so no market had yet developed, complained Colonia Insurance AG board member Friedrich K. Rauch. Thinking in communications technology had been frozen, with the result that only standard solutions were applied; lack of competition had resulted in a lack of new services.

He outlined a speech communication system that was being developed in conjunction with broadband communications; it would make insurance companies more

attractive and be customer-operated. This very well-received address illustrated the necessity of overcoming the barriers in speech communication as well.

Former GDR Television Ends Broadcasts

*LD0101114892 Hamburg DPA in German 2305 GMT
31 Dec 91*

[Text] Berlin (DPA)—As the last second of the old year ticked away, the former GDR television finally ended its broadcasts. Thirty-nine years and nine days after the premiere of the German Television Company (Deutsche Fernsehfunk—DFF) in the GDR, a huge audience said its farewells to the once SED [Socialist Unity Party of Germany]-dominated station on New Year's Eve. Following the GDR's peaceful revolution, DFF became an acceptable TV station between Ruegen and the Erzgebirge (i.e. all over the former GDR).

Three public Land broadcasting companies are to broadcast on the DFF frequencies: the Central German Broadcasting Corporation (Mitteldeutsche Rundfunk—MDR) in Saxony, Thuringia, and Saxony-Anhalt; the East German Broadcasting Company Brandenburg (Ostdeutsche Rundfunk Brandenburg—ORB) in the Berlin-Brandenburg area; and the Northern German Broadcasting Corporation (Norddeutsche Rundfunk—NDR) in Mecklenburg-Western Pomerania. In accordance with the union treaty, these stations will also replace the former central GDR broadcasting company.

The new regional companies will take over a number of popular DFF TV programs, including the entertainment show "A Colored Cauldron" and a program about old films called "The Junk Room." All over eastern Germany the popular TV evening program for children "The Sandman" will also be broadcast in the future. ARD and ZDF (First and Second German Television) have been broadcast throughout eastern Germany for some time already.

Telekom Plans Sharp Cost Reduction

Director Outlines Goals

*92GE0148A Duesseldorf HANDELSBLATT in German
9 Dec 91 p 15*

[Report on interview with Telekom Managing Director Helmut Ricke by Georg Weishaupt; place and date not given: "The Telephone Giant Must Work More Efficiently"]

[Text] The enormous investments in the new laender, the high taxes to the Federal Government, and the increasingly fierce competition from the major international telephone companies are forcing the postal enterprise, Telekom, to a clear reduction of prices. "We have to invest less per German mark [DM] of sales revenue and make do with fewer employees. That is the uppermost goal for the nineties, there is no question about it,"

is how Managing Director Helmut Ricke, in a conversation with HANDELSBLATT, describes the future goal of the state-owned enterprise.

This is the only way Telekom will be able to "offer the best service quality possible at prices which stand up to international comparison and at the end of the decade be in the top group of telecommunications suppliers worldwide." Ricke uses the U.S. Bell Telephone companies as a standard for comparison. These companies, which profit from the deregulation of the U.S. market, "achieve a 20-percent higher per capita sales revenue than Telekom."

Ricke mentions several reasons for this: "The sales revenue per telephone subscriber is "significantly higher than in Germany." In the United States every subscriber records an average of three times more hours of calling annually. This, in turn, is due to the numerous additional services from which U.S. market leader AT&T, for example, receives half of its telephone business. The comparable "130" Telekom service, in which the called party pays the telephone charges, has not been sufficiently implemented yet, Ricke admits. This will change at the end of 1992, however, when Telekom will introduce its intelligent network.

In addition to a lack of variety in services, the telephone charges also keep many customers from lifting the receiver more frequently. The best example of this is the relatively high prices for long-distance calls to the United States. At present, Telekom is forced to accept that an increasing number of U.S. telephone companies offer their customers in Germany calls to the United States at the favorable U.S. rates. Says Ricke: "That can only be corrected if we adjust to these rates." He promises improvement: "We are working hard on taking a first, clear step in this direction over the next year."

The managing director realizes that Telekom can only lower its rates if at the same time it reduces its costs. Personnel costs are a significant factor. And in that sector he has found a shortcoming: "Many labor processes must be computerized and automated. In that respect we are clearly behind others who offer these services." Furthermore, electronic data processing is to be increasingly used to control work routines, so that the services rendered will be more efficient and better. But there is "absolutely no intention of achieving higher per capita sales revenue by reducing services," Ricke emphasizes.

Ricke Stresses Customer Orientation

In addition to personnel costs, capital expenditures (amortization and interest payments), which still represent 50 percent of the overall costs, must be critically examined. Their future level depends, among other things, on the upcoming investments in the telephone network. For that reason, even at the planning stage for new networks and technologies, Ricke wants to aim for the market: "If we intend to achieve a distinct leadership position in Europe in the establishment of a customer-related, innovative infrastructure, we will only succeed in doing so if we are in absolute step with our industry."

As an example of cooperation with industry he mentions the fiberglass project in the new Bundeslaender and the Berlin field trial in wideband switching and transmission of video images.

In order to realize the stated goal of significant cuts in procurement costs, Telekom wants to bring the applications and standards for the wideband universal network in Europe to a common denominator. "As soon as possible, we need a European Economy of Scale," Ricke demands with a view to Far East competitor Nippon Telephone & Telegraph (NTT), which intends to connect the first Japanese households to its wideband network as early as 1995.

The Telekom chief admits to a clear need for catching up in the field of research (460 employees) and development (R&D) as well. He describes sectors such as "market research and software development" as "underdeveloped." It is a matter of utilizing one's own resources as well as spending more money on external development contracts in the areas of network and network-related services, which should emphasize application orientation.

That will cost Telekom a great deal of money: "We will increase our R&D budget from approximately DM500 million (1991) to DM730 million over the next year and DM910 million for the year after next, which will then represent 1.7 percent of the sales revenue." This rate will put Telekom close to the figures of its model, the Bell telephone companies. As proof that the R&D budget will not be increased solely with government subsidies, Ricke mentions the amount which the federal research minister has earmarked for telecommunications in 1992: "It is DM110 million."

This bold view of the future may not distort the picture of profitability of existing services. Market opportunities are being intensively explored at the moment for services which have been losing money for years, Ricke explains. By that he means the information services, the areas of coin telephones, videotext, and wideband cabling.

"Based on the premise that in the long run we will be held accountable by our customers, we will also arrive at the difficult decision for one or another service sector that it just is not working any more." That decision can only be made, however, after the federal postal minister issues the regulation for obligatory services. This is expected over the course of next year.

Patience is also required in the promising field of digital mobile telephone service. The commercial start of the two D1 (Telekom) and D2 (Mannesmann Mobilfunk [mobile radiotelephone]) networks is clearly being delayed by the fact that the industry still cannot deliver new, tested mobile telephones on a large scale. Ricke says soberly: "I do not foresee the availability of tested terminal equipment before the end of the year."

The postal enterprise must also hold its breath for a while in the matter of foreign business. Ricke reports, however, that customers in the United States could be persuaded to do their data communication with Europe

with Telekom. But "we have learned, above all, what it is we must still urgently improve for our customers."

Privatization as Solution

92GE0148B Duesseldorf *HANDELSBLATT* in German
9 Dec 91 p 15

[Commentary by Georg Weishaupt: "Telekom's Personnel Problems"]

[Text] Helmut Ricke, managing director of the Federal postal enterprise, Telekom, is no friend of pithy expressions. When he says something about corporate strategy, he formulates it carefully and in a well-balanced way. This is particularly true for statements concerning the hot topic of Telekom's "employment situation." The per capita sales revenue must be increased by one-fifth in order to be able to keep up in international competition, he says. The result would be, for example, that in the future many jobs would have to be automated and sequences controlled by computer.

In plain words this means: Telekom employs too many people. Measured by the employees of the U.S. competitors, the Telekom core workforce is 20 percent too large. Based on numbers alone, the state-owned enterprise must thus lay off about 50,000 of its approximately 250,000 employees over the next few years.

Telekom's management can, of course, try to reduce the holdovers from the easy-going times of the telecommunications authority by turnover. But it is doubtful whether that alone will be sufficient to give the company a more streamlined shape. First, the problem of excess personnel cannot be selectively solved at all levels through natural attrition. Second, savings cannot always be regulated by the transfer of personnel. From the aspect of the Telekom management, another, more serious, factor is that approximately 50 percent of the employees are civil service employees, who cannot be fired.

It is becoming evident, however, that the rigid corset of public employment rights can be burst, in connection with the planned transformation of Telekom into a stock corporation. Federal Postal Minister Christian Schwarz-Schilling wants to pave the way for that as early as during this legislative period by means of a constitutional amendment. It would result in Telekom's being able to act like a private company even in an employer capacity.

Even so, the subject of civil servants remains. It will not be possible to remove any one of them. But there are other possibilities of inducing them on a voluntary basis to give up their government privileges. Financial incentives such as salary increases and overtime pay are conceivable. A possible promotion could also be a weighty reason for some civil servants to change their employee relationship. It is doubtful, however, whether a great many civil servants could be tempted with these offers.

Telekom will be significantly less hampered with new employees, to be sure. Future employees of Telekom AG will be paid the salaries by the telephone company which are demanded in the market. The privatized company will then be able to buy specialists with non-tariff pay who in today's conditions hardly even sign on with Telekom. Managing director Ricke will thus get closer to his goal of raising the quality and efficiency of Telekom's work.

But there is still a long way to go in parliament until the privatization of the postal enterprise. Until then, Ricke has to limit himself to small steps.

Berlin, Brandenburg Initial State Treaty on Media
LD2512081491 Berlin ADN in German
1307 GMT 23 Dec 91

[Excerpt] Berlin (ADN)—The Ostdeutsche Rundfunk Brandenburg [ODR] and Sender Freies Berlin [SFB] are to transmit a joint third television program. This emerges from a state treaty between Berlin and Brandenburg which has been initialled by Volker Kaehne, head of the Berlin state chancellery, and Juergen Linde, head of the Brandenburg state chancellery.

Eduard Heussen, deputy spokesman of the Berlin Senate, added in a press statement today that the treaty also sets out the two stations' share of the ARD joint program. Two joint programs and two regional programs each are planned for radio. [passage omitted]

NETHERLANDS

Philips Builds Dutch Passive Optic Network
92M10062X Stuttgart LASER UND
OPTOELEKTRONIK in German Oct 91 p 13

[Text] The Dutch PTT [Post, Telegraph, and Telecommunications administrations] has brought a pilot project entitled "Fiber to the Home" into service in the newly developed area of Sloten in Amsterdam. Philips has connected 200 households to the head end located in the telephone exchange via eight passive optical networks. The subscribers are now receiving a telecommunications service, television, and radio programmes via a glass fiber. With this field trial, Philips has set up a glass fiber network that can be installed and operated efficiently within existing services, such as telephone and TV/radio. Moreover, the glass fiber infrastructure is designed in such a way that it will be able to transmit services that become available in the future.

All signals are fed into the single mode fiber by the head end, which is located in the local telecommunications exchange.

Optical directional couplers made for economic use of a single fiber for both directions with only one common wavelength (1300 nm window).

Television and radio programmes are transmitted to all subscribers on a second wavelength (1500 nm [nautical

mile] window), again over the same glass fiber network. The use of FM technology for this service offers a high passive distribution factor (power budget). This shares the costs of the head end (DFB [distributed feedback] laser transmitter) among several subscribers.

A highly developed network management system provides simultaneous configuration and error control of all eight networks. Subscriber installations can be disconnected, new network terminations can be connected, and channel capacities can be allocated during operation via a user-friendly menu in the management system.

PORTUGAL

Government Allows Radio Station To Form Network

LD2812091191 Lisbon RDP Comercial Radio Network in Portuguese 1900 GMT 27 Dec 91

[Excerpt] The government has decided to allow local radio stations to associate themselves in order to form national networks. The Council of Ministers, which met today, made the necessary changes to the law on local radio stations to make this possible. Here is government spokesman Marques Mendes speaking about the government's acceptance of national radio networks:

[Begin recording] We believe that this system whereby local radio stations are allowed to form associations among themselves is a step in the right direction and an extremely positive contribution. It is now up to the radio stations to avail themselves of the right that will be theirs as soon as this legislation is passed. [end recording] [passage omitted]

SWEDEN

Private Firms Offer Telecommunications Competition

92WT0047B Stockholm DAGENS NYHETER in Swedish 6 Nov 91 p C 2

[Unattributed article: "Swedish Telecom Losing Market Share"]

[Text] The management of the Swedish Telecommunications Administration (Telecom) fears that Telecom may lose about half of the Swedish telecommunications market within five years, according to the financial newspaper FINANSTIDNINGEN.

"We are going to experience competition in the whole country, not only in the traffic between Stockholm and Goteborg. We are probably going to see one or two alternative telecommunication networks in Sweden," says Bertil Thorngren, Telecom's planning manager, when interviewed by FINANSTIDNINGEN.

A consequence of the stiffer competition in Sweden, has been a price reduction of up to 50 percent on the

telephone networks which have been most affected by the competitive market conditions.

Recession Taking Toll on Ericsson

92WT0047A Stockholm DAGENS NYHETER
in Swedish 15 Nov 91 pp C 1-2

[Article by Thorbjorn Sprangs: "Ericsson Takes Serious Slide"]

[Text] The recession now hits the telephone industry with full force. Ericsson's profits have been reduced by more than 50 percent so far this year and the company's management is bracing itself against more bad news in the near future.

During the first nine months of the year, Ericsson's profits decreased by 53 percent, or, from a profit of 3.2 billion kronor last year to 1.5 billion kronor during the same months this year. A decrease had been expected but not of this magnitude, Ericsson CEO, Lars Ramqvist, stated last Thursday.

"Our group has been extremely hard hit by the recession. Therefore, we have to make some adjustments and cut our expenditures, which, I am sorry to say, will affect our employees," he said.

Layoffs in Sweden

Ramqvist did not know how many people had to be laid off. So far this year, Ericsson has laid off 2000 employees. "I can't rule out doubling this amount," he added.

Because Ericsson's operations are still, for the most part, in Sweden, this will mean that most of the cutbacks will be effected there. "In other words, we are forced to exacerbate an already strained labor market," noted Ramqvist.

At the moment the Ericsson organization is being analyzed and by the end of the year the employees will be notified of cutbacks and reductions.

Ericsson currently has a number of manufacturing sites in various places in Sweden and abroad. A long-term goal is to reduce the number of production locations. It is unclear whether management, at this stage, is prepared to completely eliminate one or more manufacturing facilities.

More Research

The recession has been more severe and more protracted than Ericsson earlier projected. Consequently the profit/loss projections for 1991 will now become "gloomier." Ericsson management has revised its earlier statement that this year's profits would be lower than last year's profit of 4.8 billion, and is now expecting a "significant" drop.

As far as 1992 is concerned, Ericsson will only say that it will be a tough year.

During the current year, however, Ericsson has continued to invest heavily in R&D. Projected for the whole of 1991, these expenditures will increase by more than 2 billion kronor, totalling approximately 10 billion kronor.

The spending on R&D will have a strong dampening effect on the profit and loss statement, especially in light of decreasing invoicing.

"Our technology investments are necessary for our future and therefore our current projects will be completed," said Ramqvist.

The most drastic order decrease has been experienced in the field of public telecommunications. Every market seems to continue its downward spiral. Projects and purchases are postponed and competition is heating up.

Difficult in Spain

Reliable markets, such as Great Britain and Spain, for example, seem totally deflated.

The Spanish, government-owned, telephone company Telefonica has decided to reduce the number of telephone exchanges from more than two million this year to 700,000 next year.

This signifies for Ericsson a reduction of deliveries from more than 800,000 exchanges this year to fewer than 240,000 in 1992. During the bonanza of 1990, Ericsson delivered 1.1 million telephone exchanges to Spain.

"This is, as everybody realizes, a dramatic turn for the worse and it is very difficult to adjust to it," said a visibly concerned Ramqvist.

In summary: Ericsson has received 20 percent fewer orders during the period in question, or a total amount of 31 billion kronor. However, some important orders have been received recently; for instance, in the mobile data field (Mobitex) and in the field of personal telephony.

Unexpectedly Great Decline for Ericsson

Profits, in millions, were cut in half during the first nine months of the year. (Calculated before balance provisions and tax).

The Status of Ericsson's Major Markets

Italy: customers postpone projects and orders.

Spain: dramatic reduction in number of telephone exchanges.

Sweden: drastic reduction in number of mobile phones.

United States: mobile phone growth flat. Mexico: telmex has "paralyzed" the phone market; some optimism felt, however, for 1992.

Great Britain: large investment cuts.

Australia: the most severe crisis since the 1930's. Investment stop.

Finland: drastic decline.

Netherlands: weak demand.
Canada: clear decline. Biggest customer faces financial crisis.

TURKEY

Plans To Relay TRT Television to Turkic Republics

TA2612130291 Ankara *Turkiye Radyolari Network*
in Turkish 2100 GMT 25 Dec 91

[Text] PTT [Post, Telephone, and Telegraph Administration] has prepared a \$5.5 million project to enable Kazakhstan, Uzbekistan, Turkmenistan, Kyrgyzstan, and Tajikistan to receive TRT [Turkish Radio and Television] television broadcasts. According to a statement issued by PTT, a ground station and a television transmitter capable of receiving and transmitting programs will be established in the capitals of these republics. According to the project, relay stations will also be established in five big cities in the republics to receive TRT television broadcasts. TRT, on its part, will build a new satellite ground station in Ankara to relay the

television programs. To realize the project, transponders will be rented from the Intersat satellite organization. The republics will invest approximately \$1 million in the project. Furthermore, each republic will pay an annual rent of \$200,000 to Intersat. PTT will invest about \$500,000 in the project.

Private Television Channels To Be Allowed

NC2512090691 Ankara *TURKISH DAILY NEWS*
in English 20 Dec 91 p 2

[Text] Istanbul—As companies are eagerly awaiting the change in the law Jan 1, 1992, that will allow private TV channels to operate freely, Yucel Cakmakli, the director of Halal-1, a consortium of 20 companies and the conservative mass circulation newspaper TURKIYE, has announced he will launch a new Islamic-influenced TV channel toward the end of 1992. Meanwhile, it has been announced that one of the two largest private companies in Turkey, Koc Holding, has signed a deal with U.S. television network ABC, to become its representative in Turkey.

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